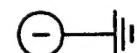


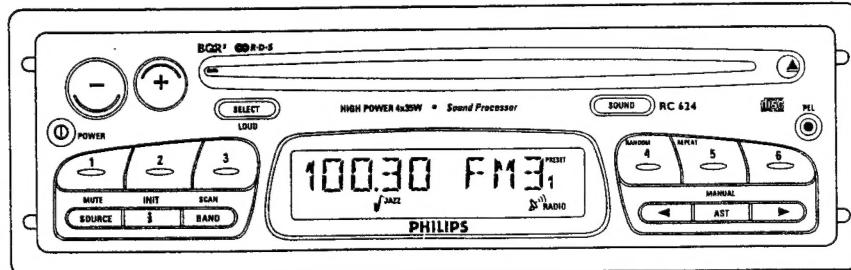
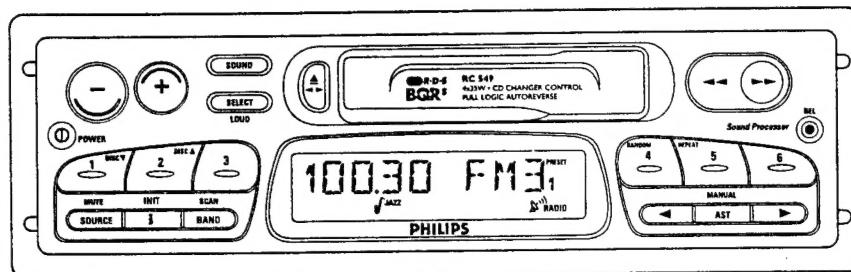
Cassette Car Radio 22 RC 604/00/17
22 RC 624/00/17
22 RC 519/00
22 RC 549/00

Service Manual

For repair information of the cassette deck see Service Manual of Auto cassette deck SCA-R3.3 (4822 725 25481)

For repair information of the CD player see Service Manual of CD mechanism CDM-M2-1.1.(4822 725 25483)

12 V 



Technical Specifications

General

Power Supply	:	10.5 - 16V
Quiescent Current (at 12.6V)	:	< 4.0mA
Fuse	:	10A

Radio

TUNING RANGE IN DIFFERENT "INIT" MODE

INIT MODE	BAND	FREQUENCY	GRIDS MANUAL/AUTO
EUROPE	FM	87.5 - 108MHz	50kHz/100kHz
	LW	144 - 288kHz	1kHz/1kHz
	MW	531 - 1629kHz	1kHz/9kHz step
AMERICA LATAM	FM	87.5 - 108MHz	100kHz/100kHz
	AM	530 - 1710kHz	1kHz/10kHz step
ASIA	FM	87.5 - 108MHz	50kHz/50kHz
	MW	531 - 1629kHz	1kHz/9kHz step

Aerial input impedance	:	75 ohm
IF-FM (1/2)	:	10.7MHz/72.2MHz
IF-AM(1/2)	:	10.7MHz/450kHz
α - 3dB	:	7±5 μ V
SDS (10 dB channel separation)	:	150 μ V ± 3dB
Stereo channel separation	:	> 21dB
FM sensitivity for 26dB S/N	:	< 4.5 μ V
MW sensitivity for 26dB S/N	:	< 30 μ V
LW sensitivity for 26dB S/N	:	< 38 μ V

Cassette Deck (RC549/519 ONLY)

Number of tracks	:	2x2
Tape speed	:	4.76 cm/second +3% -1%
Wow and Flutter	:	< 0.30%
Crosstalk	:	> 40dB

CD player (RC624/604 ONLY)

CD mechanism	:	CDM-M2-1.1
Frequency response	:	30Hz - 16kHz
Crosstalk	:	55dB

Amplifier

Output Power (D=10%)	:	4x16W ± 1dB/4 Ω
Fader	:	60dB
Balance	:	60dB



WARNING

All IC's and many semiconductors are susceptible to electronic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected to the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD Equipment:

Anti-static table mat	large 1200x650x1.25mm	4822 466 10953
	small 600x650x1.25mm	4822 466 10958
Anti-static wrist band		4822 395 10223
Connection box (1MOhm)		4822 320 11307
Extendible cable (to connect wrist band to conn. box)		4822 320 11305
Connecting cable (to connect table mat to conn. box)		4822 320 11306
Earth cable (to connect any product to mat or box)		4822 320 11308
Complete kit ESD3 (combining all above products)		4822 310 10671
Wristband tester		4822 344 13999

INSTALLATION

If your car is equipped with ISO connectors, simply insert them in connectors of the car radio. If not, you can use an adaptor cable (Refer to the table on the separate installation card).

PREPARATION

Voltage and polarity: The set must be connected to a 12V car battery with negative terminal to earth (car chassis).

Warning: To prevent short-circuiting, disconnect the negative car battery terminal until the set has been mounted and connected (fig.1). See separate installation card.

CONNECTOR A (fig.2)

Recommended Power supply connections

- **Red lead A7 :** Connect to a switched 12V supply (switched on/off by car ignition).
- **Yellow/red lead A4 :** Connect to a permanent 12V supply.
- **Brown lead A8 :** Connect to earth (car chassis).

Alternative Power supply connections for ON/OFF LOGIC (see illustration on separate installation card for correct connection).

- **Red lead A7 :** Connect to a permanent 12V supply.
- **Yellow/red lead A4 :** Connect to a switched 12V supply (switched on/off by car ignition).
- **Brown lead A8 :** Connect to earth (car chassis).
- See INITIAL SETTINGS; select Option 'LOGI' and set the Choice to 'ON'.
- The ON/OFF LOGIC feature enables use of the set (for one hour) after you have removed the car ignition key.
- The ON/OFF LOGIC feature in this set functions only if your car has been prepared for it (e.g. certain VW and Opel/Vauxhall cars). Consult your car service manual or check with your dealer to confirm this.

Others connections (fig.2)

- **Pink lead wire (Telephone mute) :** If your car telephone provides a mute signal, it can be used to automatically interrupt the set's audio output.
- Connect the telephone mute wire to Pink lead wire (TEL. MUTE).
- See INITIAL SETTINGS; select Option 'PHONE' and set the Choice to 'LO' or 'HI' according to phone type.

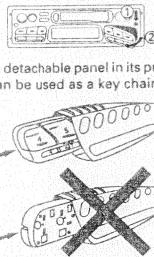
* only for certain versions

SECURITY

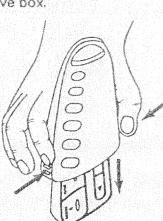
For theft protection this set is provided with the following security features :

DETACHABLE PANEL

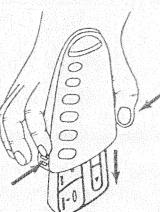
- Take the detachable panel with you when leaving the car.
- Remove the panel by pressing the REL button.



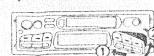
- Keep the detachable panel in its protective box which can be used as a key chain.



- Always replace the detachable panel before starting to drive.
- To release the detachable panel from the protective box.



- Replace the panel starting with the left-hand side of the set. Then push the panel until it clicks into position.



- **Blue lead A5 (Automatic Aerial) :** This radio can provide a 12V signal for the control of an automatic motor aerial or the supply of an electronic aerial by connection.

Do not use this connection for the supply lead of the aerial motor!

- **Orange lead A6 :** Connect to a 12V supply.

When the car headlamps are switched on, the rotary knobs of radio are illuminated (even when the radio is switched off).

- **Line-output ***

You can connect a power amplifier (with 2 or 4 additional loudspeaker) to this set with the RCA cable.

- Connect Red socket to Right channel and white socket to Left channel.

- Connect Blue wire to Amplifier Remote on/off.

CONNECTOR B (fig.2)

Loudspeakers (use 4 ohm loudspeakers only)

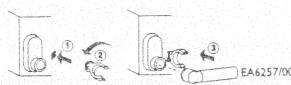
- Do not connect any of the loudspeaker leads to earth or directly to a booster/amplifier.

Connecting 4 loudspeakers

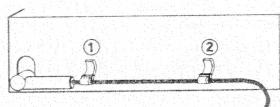
Front	Rear
Left+ Green (B5)	White (B7)
Left- Green/black (B6)	White/black (B8)
Right+ Grey (B3)	Blue (B1)
Right- Grey/black (B4)	Blue/black (B2)

AERIAL

Fix antenna adaptor* (EA6257/00) if needed.



Insert aerial plug into aerial socket (good reception is only possible with a good aerial). (Optional) Secure the aerial wire with cable tie.



* only for certain versions

3

SWITCHABLE WARNING LED

- The LED flashes when the detachable panel is removed.



USEFUL TIPS

You can switch off the flashing LED if desired. See INITIAL SETTINGS; select Option 'LED' and in the Choice to 'OFF'.

SECURITY WARNING STICKERS

- Stick the supplied 'Security' warning stickers on your car windows.



IDENTIFICATION NUMBER

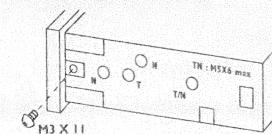
This set has a unique identification number (stated on the 'Security card'). This card is required as a proof of ownership when the set is stolen, when the detachable panel is lost or when requesting service.

- Remove the 'Security card' before installing the set. Do not keep the 'Security Card' in your car.



USEFUL TIP SECURITY CARD

The detachable panel can be locked by 4 M3 x 11 screw.



1-2

INITIAL SETTINGS

It is possible to modify many of the set's initial settings according to your preferences.



- Press the INIT key for at least 2 seconds (until you hear a beep) to enter the initialisation mode. The display shows 'INIT'.
- Briefly press **◀** or **▶** key to select the option you want to modify.
- Briefly press the AST key to adjust the chosen option. The choice shown on the display will be memorized by the set when you select another option or leave the initialisation mode.
- Press the INIT key for at least 2 seconds (until you hear a beep) to leave the initialisation mode.

Note : The set automatically leaves the initialisation mode about 1 minute after your last operation.

Option	Choice	Usage
(◀ or ▶)	(AST)	Select the desired display colour : Green or Orange.
COLOUR	[G, O]	Select desired clock format. (See 'SETTING THE CLOCK').
TIME *	[OFF, 12H, 24H]	Source connected to Connector C
SRC *	[CDC, AUX]	- Select 'CDC' for a Philips CD changer (D/B type); - Select 'AUX' for a portable audio player.
REMOTE	[N, Y]	Select 'Y' to connect a Philips remote control (EA2001).
PHONE	[NO, LO, HI]	Select 'LO' or 'HI' according to phone ('LO' is most cases). See 'PREPARATION', 'OTHERS CONNECTIONS' to connect phone. Select 'NO' if no phone is connected.
BLEEP	[-2, -1, 0, +1, +2]	Select volume level of confirmation beeps.
LOGI	[OFF, ON]	Select ON to limit the use of the set to one hour when the car ignition is switch off. See 'PREPARATION', 'CONNECTOR A'.
LED	[OFF, ON]	Select OFF if you do not want the LED to blink when the front is removed.
LOUD	[LOW, MID, HI]	Select the level of loudness control.
TAPE	[-2, -1, 0, +1, +2]	Volume level of TAPE relative to tuner.
CDC* or AUX*	[-2, -1, 0, +1, +2]	Volume level of CD changer or AUX input relative to tuner.
TA	[-2, -1, 0, +1, +2]	Volume level of Traffic Announcement, News bulletins and Alarm messages relative to tuner.
SRCH	[DX, LO]	Select 'LO' if you wish to search only for strong stations during automatic tuning to a frequency.
AF	[OFF, ON]	Select 'OFF' to prevent the radio from returning to Alternative Frequency.
RADIO	[EUROPE, LATAM, AMERICA, ASIA]	Select the tuner according to European, Latin America, America or Asia standard.
MW	[OFF, ON]	Select 'OFF' to suppress MW if not in use (only applicable when RADIO is in European standard).
AM	[OFF, ON]	Select 'OFF' to suppress AM if not in use (only applicable when RADIO is in Latin America, America or Asia standard).
LW	[OFF, ON]	Select 'OFF' to suppress LW if not in use (only applicable when RADIO is in European standard).

Note : Reference volume can be preset by the volume up or down keys during the initialisation mode.

* only for certain versions

4

MOUNTING

METAL SLEEVE (fig.5)

- Install the metal sleeve (dimension 182x53 mm) in the dashboard.
- Fix metal sleeve into place by pressing the metal tags outwards using a screwdriver.

MOUNTING RADIO

This radio can be properly installed either from conventional Front Mounting or Rear Mounting.

FRONT MOUNTING

- Slide the radio into the metal sleeve until the springs at either side of the radio snap into the openings of the sleeve (fig.6).
- Finally reconnect the negative car battery terminal (fig.7).

REMOVING RADIO (using the two U-brackets supplied)

- Insert both U-brackets into the holes on the front of the set until they lock. Pull out the radio (Fig.8).

REAR MOUNTING (fig.9)

- Remove the trimplate around the front panel and the side springs.
- Select a position where the screw holes of the mounting bracket and the screw holes of the radio become aligned and tighten the screws at 2 places on each side.
- Only use M5 screws that are not longer than 6mm.

REPLACING FUSE (Fig. 2)

- Use a 10A blade-type fuse.

INSTALLATION

If your car is equipped with ISO connectors, simply insert them in connectors of the car radio. If not, you can use an adaptor cable (Refer to the table on the separate installation card).

PREPARATION

Voltage and polarity: The set must be connected to a 12V car battery with negative terminal to earth (car chassis).

Warning: To prevent short-circuiting, disconnect the negative car battery terminal until the set has been mounted and connected (fig.1). See separate installation card.

CONNECTOR A (fig.2)

Recommended Power supply connections

- **Red lead A7 :** Connect to a switched 12V supply (switched on/off by car ignition).
- **Yellow/red lead A4 :** Connect to a permanent 12V supply.
- **Brown lead A8 :** Connect to earth (car chassis).

Alternative Power supply connections for ON/OFF LOGIC (see illustration on separate installation card for correct connection).

2

- **Red lead A7 :** Connect to a permanent 12V supply.
- **Yellow/red lead A4 :** Connect to a switched 12V supply (switched on/off by car ignition).
- **Brown lead A8 :** Connect to earth (car chassis).
- See INITIAL SETTINGS; select Option 'LOGI' and set the Choice to 'ON'.
- The ON/OFF LOGIC feature enables use of the set (for one hour) after you have removed the car ignition key.
- The ON/OFF LOGIC feature in this set functions only if your car has been prepared for it (e.g. certain VW and Opel/Vauxhall cars). Consult your car service manual or check with your dealer to confirm this.

Others connections (fig.2)

- **Pink lead wire (Telephone mute) :** If your car telephone provides a mute signal, it can be used to automatically interrupt the set's audio output.
- Connect the telephone mute wire to Pink lead wire (TEL. MUTE).
- See INITIAL SETTINGS; select Option 'PHONE' and set the Choice to 'LO' or 'HI' according to phone type.

* only for certain versions

English

- **Blue lead A5 (Automatic Aerial) :** This radio can provide a 12V signal for the control of an automatic motor aerial or the supply of an electronic aerial by connection. Do not use this connection for the supply lead of the aerial motor!
- **Orange lead A6:** Connect to a 12V supply. When the car headlamps are switched on, the rotary knobs of radio are illuminated (even when the radio is switched off).
- **Line-output ***
You can connect a power amplifier (with 2 or 4 additional loudspeakers) to this set with the RCA cable.
- Connect Red socket to Right channel and white socket to Left channel.
- Connect Blue wire to Amplifier Remote on/off.

CONNECTOR B (fig.2)

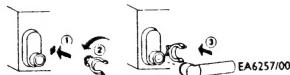
Loudspeakers (use 4 ohm loudspeakers only)

- Do not connect any of the loudspeaker leads to earth or directly to a booster/amplifier.
- **Connecting 4 loudspeakers**

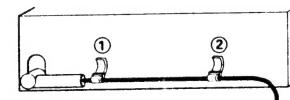
Front	Rear
Left+ Green [B5]	White [B7]
Left- Green/black [B6]	White/black [B8]
Right+ Grey [B3]	Blue [B1]
Right- Grey/black [B4]	Blue/black [B2]

AERIAL

Fix antenna adaptor* (EA6257/00) if needed.



Insert aerial plug into aerial socket (good reception is only possible with a good aerial). (Optional) Secure the aerial wire with cable tie.



CONNECTOR C *

- **CD changer (fig 3) :** You can connect (see mounting instructions for the CD changer) the following CD changer (D'B type) to this set:
 - RC032
 - RC026/00
 - RC026/50, order new cable EA6263
- **Portable player (fig.4) :** You can connect a portable DCC, CD or cassette player to this set (instead of a CD changer) to this set. Use the cable (EA6786) mentioned in the illustration. The cable must be connected to an output of 750mV (in most cases the headphone output of the portable player is suitable).
- Refer to INITIAL SETTINGS, select Option 'SRC' and set the Choice to 'AUX'.
- This indicates to the set that a portable player is connected instead of a CD changer.
- Increase the volume of the portable player to desired level.

CONNECTOR D

- **Philips Remote Control EA2001 (fig.2) :** You can connect a Philips remote control (EA2001) to this set (see mounting instructions for the EA2001).

REAR STUD

Screw rubber buffer E onto fixing stud at rear of set.

MOUNTING

METAL SLEEVE (fig 5)

- Install the metal sleeve (dimension 182x53 mm) in the dashboard.
- Fix metal sleeve into place by pressing the metal tags outwards using a screwdriver.

MOUNTING RADIO

This radio can be properly installed either from conventional Front Mounting or Rear Mounting.

FRONT MOUNTING

- Slide the radio into the metal sleeve until the springs at either side of the radio snap into the openings of the sleeve (fig.6).
- Finally reconnect the negative car battery terminal (fig.7).

REMOVING RADIO (using the two U-brackets supplied)

- Insert both U-brackets into the holes on the front of the set until they lock. Pull out the radio (Fig.8).

REAR MOUNTING (fig.9)

- Remove the trimplate around the front panel and the side springs.
- Select a position where the screw holes of the mounting bracket and the screw holes of the radio become aligned and tighten the screws at 2 places on each side.
- Only use M5 screws that are not longer than 6mm.

REPLACING FUSE (Fig. 2)

- Use a 10A blade-type fuse.

* only for certain versions

4

INITIAL SETTINGS

It is possible to modify many of the set's initial settings according to your preferences.



- Press the INIT key for at least 2 seconds (until you hear a beep) to enter the Initialisation mode. The display shows 'INIT'.
- Briefly press **◀** or **▶** key to select the option you want to modify.
- Briefly press the AST key to adjust the chosen option. The choice shown on the display will be memorized by the set when you select another option or leave the initialisation mode.
- Press the INIT key for at least 2 seconds (until you hear a beep) to leave the Initialisation mode.

Note : The set automatically leaves the initialisation mode about 1 minute after your last operation.

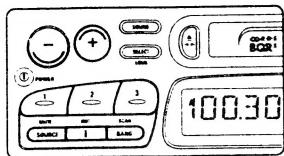
Option	Choice	Usage
(◀ or ▶)	(AST)	Select the desired display colour : Green or Orange.
COLOUR	[G, O]	Select desired clock format. (See 'SETTING THE CLOCK').
TIME *	[OFF, 12, 24H]	Source connected to Connector C
SRC *	[CDC, AUX]	<ul style="list-style-type: none"> - Select 'CDC' for a Philips CD changer (D'B type); - Select 'AUX' for a portable audio player.
REMOTE	[N, Y]	Select 'Y' to connect a Philips remote control (EA2001).
PHONE	[NO, LO, HI]	Select 'LO' or 'HI' according to phone ('LO' is most cases). See 'PREPARATION', 'OTHERS CONNECTIONS' to connect phone. Select 'NO' if no phone is connected.
BLEEP	[-2, -1, 0, +1, +2]	Select volume level of confirmation beeps.
LOGI	[OFF, ON]	Select ON to limit the use of the set to one hour when the car ignition is switch off. See 'PREPARATION', 'CONNECTOR A'.
LED	[OFF, ON]	Select OFF if you do not want the LED to blink when the front is removed.
LOUD	[LOW, MID, HI]	Select the level of loudness control.
TAPE	[-2, -1, 0, +1, +2]	Volume level of TAPE relative to tuner.
CDC* or AUX*	[-2, -1, 0, +1, +2]	Volume level of CD changer or AUX input relative to tuner.
TA	[-2, -1, 0, +1, +2]	Volume level of Traffic Announcement, News bulletins and Alarm messages relative to tuner.
SRCH	[DX, LO]	Select 'LO' if you wish to search only for strong stations during automatic tuning to a frequency.
AF	[OFF, ON]	Select 'OFF' to prevent the radio from returning to Alternative Frequency.
RADIO	[EUROPE, LATAM, AMERICA, ASIA]	Select the tuner according to European, Latin America, America or Asia standard.
MW	[OFF, ON]	Select 'OFF' to suppress MW if not in use (only applicable when RADIO is in European standard).
AM	[OFF, ON]	Select 'OFF' to suppress AM if not in use (only applicable when RADIO is in Latin America, America or Asia standard).
LW	[OFF, ON]	Select 'OFF' to suppress LW if not in use (only applicable when RADIO is in European standard).

Note : Reference volume can be preset by the volume up or down keys during the initialisation mode.

* only for certain versions

5

AUDIO ADJUSTMENT



- POWER**: Press Power key to switch the set on or off.
- VOLUME**: Press - key or + key to adjust the volume.
- Please make sure you can still hear the traffic (horns, sirens,.....)
- SOUND**: Choose one of the predefined sound styles with the SOUND key.
- BASS-TRE**: Your own settings of bass and treble.
- FLAT**: Mid-positions of bass and treble.
- JAZZ**: Jazz music
- VOCAL**: Speech
- CLASSIC**: Classic music
- ROCK**: Rock music
- SELECT**: Choose the desired audio mode with SELECT key.
- BASS**: (low notes), **TREBLE** (high notes), **BALANCE** (left-right), **FADER** (rear-front).
- Press - key or + key to adjust the selected audio mode. Adjustment of Bass and treble settings only applicable when 'BASS-TRE' is selected as the sound style.
- Note**: After 5 seconds the display goes back to the last mode of operation.
- LOUD**: To reinforce bass and treble especially when listening at a low volume level. Press the LOUD key at least 2 seconds (until you hear a beep) to switch loudness on or off.
- MUTE**: Press the MUTE key for at least 2 seconds to mute the sound momentarily. Press any key to restore the same volume level.
- Note**: The silent period may be interrupted by traffic announcements (if TA/NEWS is switched on).
- SOURCE**: Briefly press the SOURCE key to select the desired source. The display shows: RADIO, TAPE or CHANGER * (AUX *).

* only for certain versions

RADIO DATA SYSTEM (RDS) ON FM

Many FM stations broadcast RDS information. This car radio uses the RDS information to offer you many advantages, including:

DISPLAY OF STATION-NAME

The set displays the name of the station instead of its frequency.

AUTOMATIC RETUNING

The set continuously checks a list of Alternative Frequencies (AF) for the tuned radio station and automatically selects the best frequency.

USEFUL TIPS

Display shows frequency (not station name). Set is tuned to non-RDS station.

Radio switches to another station while driving through different reception areas of different transmitters.

See INITIAL SETTINGS; select Option 'AF' and set the Choice to 'ON'.

DISPLAY OF PROGRAMME TYPE (PTY)

If an RDS station is stored on a preset, you can check the type of programme being transmitted.

Briefly press the relevant Preset key to see the programme type (if transmitted).

INFORMATION FROM RELATED RADIO STATIONS

Enhanced Other Networks (EON) is an RDS service where the broadcaster links some stations together. If you are tuned to a station where is linked to others by EON, the set is capable of receiving Traffic Announcements (and/or News bulletins) from both the tuned station and related stations.

ALARM MESSAGES (PTY Alarm)

This set automatically receives emergency messages made by the broadcaster.

During the messages the display shows 'ALARM' and the station-name alternately.

TRAFFIC ANNOUNCEMENTS

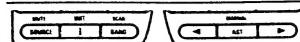
You can switch on the TA mode to give priority to Traffic Announcements (even if you play a cassette/CD* or mute the set).

You will hear the Traffic Announcements when broadcast, if you switch on the TA mode.

If the tuned station does not enable the reception of Traffic Announcements, the display shows 'NO TA'. The radio automatically searches an appropriate station.

* only for certain versions

SETTING THE CLOCK *



- Press INIT key for at least 2 seconds (until you hear a beep) to enter the initialisation mode.
- Display shows 'INIT'.
- Press < or > key to select option 'TIME'.
- Press AST key to select '12H' or '24H'.
- Press > key again.
- Display shows e.g. '00:00' (24 hour format) or 'AM 12:00' (12 hour format).
- Hour digit start flashing.
- Press AST key to adjust Hour digit.
- Press > key again.
- Minute digit start flashing.
- Press AST key to adjust Minute digit.
- Press INIT key for at least 2 seconds (until you hear a beep) to leave the initialisation mode.
- 10 seconds after any key operations, the display will always show time when clock mode is activated.

USEFUL TIPS

You can change the colour of the display. See INITIAL SETTINGS; select Option 'COLOUR' and set the Choice to 'G' (Green) or 'O' (Orange).

Set functions but no sound?

- Adjust the volume of the set.
- Adjust Fader Settings.

Set mutes when you drive or display shows 'TEL CALL'.

See INITIAL SETTINGS; select Option 'PHONE' and set the Choice to 'LO' or 'HI' according to phone type or 'NO' if no phone is connected.

Set mutes when you used the telephone, display shows 'TEL CALL', but you may still like to listen to the radio.

Briefly press + KEY to restore the same volume level.

English

RADIO



WAVEBAND

- Briefly press the BAND key to select the desired waveband. The display shows:

FM1, FM2, or FM3, MW1, or MW2, or LW (when the choice is set to 'EUROPE' under 'RADIO' option; see INITIAL SETTINGS).

FM1, FM2, or FM3, AM1, or AM2 (when the choice is set to 'LATAM' or 'AMERICA' or 'ASIA' under 'RADIO' option; see INITIAL SETTINGS).

SEARCH TUNING

Use search tuning to quickly search for a station.

- Briefly press the < key or > key.
- You will receive a station after a short time. To search for another station, press the key again.

USEFUL TIPS

You can suppress MW or LW bands if not in use.

See INITIAL SETTINGS; select Option 'MW' or 'LW' and set the choice to 'OFF'.

Cannot tune to desired station?

- Desired station is too weak, try Manual Tuning.
- See INITIAL SETTINGS; check option 'RADIO'.
- See INITIAL SETTINGS; select option 'SRCH' and set the choice to 'DX'.

MANUAL TUNING (if you know the frequency of the required station)

- Press the MANUAL key for at least 2 seconds (until you hear a beep) to switch from search tuning to manual tuning.
- Tune to the desired frequency with < and > key (keeping the key pressed changes the frequency quickly)
 - > = higher frequency
 - < = lower frequency

Note: The radio automatically switches back to search tuning after about 50 seconds with a beep.

7

8

PRESET KEYS 1-6 (STORE AND PRESET)

Six stations per waveband can be stored and recalled using the preset keys (1 to 6).

Storing a station

- Briefly press the BAND key to select the desired waveband.
- Tune-in the desired station frequency.
- Press the desired preset key (1 to 6) for at least 2 seconds (until you hear a beep).

Note: A previously-stored station is automatically erased if a new frequency is stored on the preset.

Recalling a station

- Briefly press the desired preset key.
- The display will show the band, frequency and preset number.

AUTO STORE (AST)

You can automatically store 6 FM stations on FM3 band or 6 AM(MW) stations on the AM2(MW2) band by using AUTOSTORE (AST) function. When you use Auto Store, the new station replace any station previously stored in the FM3 band or the AM2 (MW2) band.

Automatically storing stations

- Briefly press the BAND key to select the desired waveband.
- Briefly press the AST key, you will hear a beep.
- The set mutes and display shows 'FM3 AST' or 'MW2 AST' or 'AM2 AST'.
- You will hear a beep when it has finished storing 6 stations.
- You will hear the station on preset 1.
- Sometimes it may not be possible to find six stations. In this case, the remaining presets are programmed with 0000 (radio mute). If no stations are found, the previously stored stations are maintained.

FREQUENCY SCAN

The scan function gives you a quick impression of all the stations which can be received on the current waveband. You hear each station in turn for about 10 seconds.

- Press SCAN key for at least 2 seconds to switch SCAN function on or off.

CASSETTE PLAYER



PLAYBACK

Inserting a cassette automatically switches the set on.

- Slide the cassette, with the open side to the right into the cassette opening.
- If a cassette is already inserted: Briefly press the SOURCE key to select TAPE as the source. The radio mutes and cassette playback starts. The direction of playback is shown by indicator < or > .

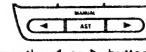
REVERSE (<>)

- Briefly press the <> button to change the direction of play.
- At the end of the tape, playback automatically continues with the other side of the tape.

REWIND (<)/FAST FORWARD (>)

- Briefly press < button to rewind or > button to fast forward.
- During fast forward or rewind, you hear the radio. If you continue fast winding until the end of the tape, playback restarts automatically.
- To stop the rewind/fast forward before reaching the end of the tape, press the same key again.

PREVIOUS / NEXT TRACK



- Briefly press the < or > button to select the desired track. Playback resumes starting from the chosen track.

The sound is muted until the track you have selected is reached.

CASSETTE EJECT (Δ)

- Press Δ key for more than 2 seconds to eject the cassette.

MAINTENANCE

After extended use of the cassette player, dust, contamination or grime can accumulate on the playback head.

This results in diminishing high-note reproduction. This can be remedied using a cleaning cassette (once or twice a month) and playing it through like an ordinary cassette.

CARE OF CASSETTES

- Only use good quality cassettes (not longer than C-90).
- To avoid possible tape damage always take out the cassette after use. Put them back in their boxes immediately after use.
- Never expose cassettes to heat or direct sunlight.

CD CHANGER*

A Philips CD-changer (D/B type) with 6 or 10 discs can be connected to this car radio.



CD PLAYBACK

- Briefly press the SOURCE key to select CHANGER as the source.
- Select the desired disc with DISC▲ or DISC▼. The display shows the track number, elapsed playing time and current disc number during playback.

At the end of the disc, playback automatically continues with the next disc. Any missing disc is automatically skip.

PREVIOUS/NEXT TRACK

- Briefly press the < or > buttons to select the desired track.
- Playback resumes starting from the chosen track. The display shows the selected track number and elapsed playing time.

FAST BACKWARD/FORWARD

- Press and hold < or > buttons to move quickly to another part of the disc during playback. Playback resumes when < or > is released.

TRACK SCAN

- Press SCAN key during playback to hear the first 10 seconds of each track.
- Press the SCAN key again to resume normal playback.

* only for certain versions

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10

RANDOM TRACK PLAYBACK

- Press RANDOM key during playback to play the track on the disc in random order.
- Press the RANDOM key again to resume normal playback.

REPEAT TRACK

- Press REPEAT key during playback to repeat the current track.
- Press the REPEAT key again to resume normal playback.

USEFUL TIPS

Display shows 'CD ERROR'.

- The disc is dirty or inserted upside down.

Display shows 'NO CD'.

- No disc is inserted in the CD magazine.

CARE OF DISCS

- Avoid making fingerprints on the disc.
- Put the disc back in its box immediately after eject it, to protect the disc from damage and dust.
- Never expose disc to heat or direct sunlight.

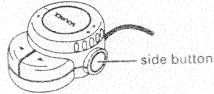
PHILIPS REMOTE CONTROL (EA2001)

2-4 A Philips remote control (EA2001) can be connected to this set. See your dealer for more information. The remote control allows you to carry out some of the main functions of the set, without the need to take your eyes off the road while driving. This increases your safety.

USEFUL TIPS

Remote control connected correctly but cannot control the set?

- See INITIAL SETTINGS; select Option 'REMOTE' and set the Choice to 'Y'.



* only for certain versions

AUDIO

- **Volume** : Adjust the volume by turning the wheel.
- **Audio mute (Silence)** : Press SOURCE key for more than 2 seconds to mute the set or cancel the mute.
- **SOURCE** : Briefly press the SOURCE key to select the desired source. The display shows: RADIO, TAPE or CHANGER * (AUX *).

RADIO

- **Waveband selection** : Press the remote control side button for more than 2 seconds to select the desired waveband.
- **Recalling a preset** : Briefly press the remote control side button to select the next preset (1 to 6).
- **Search tuning** : Briefly press the **◀** key or **▶** key to quickly search for a station.

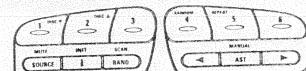
CASSETTE

- **Previous / next track** : Briefly press the **◀** key or **▶** key to select desired track.
- **Rewind/Fast forward** : Press the **◀** or **▶** key for more than 2 seconds to rewind or fast forward. Press the same key for more than 2 seconds to stop fast winding.
- **Reverse** : Briefly press the remote control side button to change direction of play.

CD CHANGER *

- **Previous / next track** : Briefly press the **◀** key or **▶** key to select desired track.
- **Fast backward / Forward** : Press and hold **◀** key or **▶** key to move quickly to another part of the disc during playback. Playback resumes when **◀** or **▶** is released.
- **Disc selection** : Briefly press the remote control side button to select the next disc.
- **Track scan** : Press the remote control side button for more than 2 seconds to switch scan on or off.

CD PLAYER



CD PLAYBACK

This CD player is suitable for 12cm discs. Inserting a disc automatically switches the set on.

- Slide the disc (with the label facing upwards) into the slot, or
- If a disc is already inserted: Briefly press the SOURCE key to select CD as the source.
- The display shows the track number, elapsed playing time during playback.

PREVIOUS/NEXT TRACK

- Briefly press the **◀** or **▶** buttons to select the desired track.
- Playback resumes starting from the chosen track. The display shows the selected track number and elapsed playing time.

FAST BACKWARD/FORWARD

- Press and hold **◀** or **▶** buttons to move quickly to another part of the disc during playback. Playback resumes when **◀** or **▶** is released.

TRACK SCAN

- Press SCAN key during playback to hear the first 10 seconds of each track.
- Press the SCAN key again to resume normal playback.

RANDOM TRACK PLAYBACK

- Press RANDOM key during playback to play the track on the disc in random order.
- Press the RANDOM key again to resume normal playback.

REPEAT TRACK

- Press REPEAT key during playback to repeat the current track.
- Press the REPEAT key again to resume normal playback.

DISC EJECT

- Briefly press **▲** to eject the disc from the player.
- If the disc is not removed within 15 seconds, the player will reload the disc.

USEFUL TIPS

Display shows 'CD ERROR'.

- The disc is dirty or inserted upside down.

Display shows 'NO CD'.

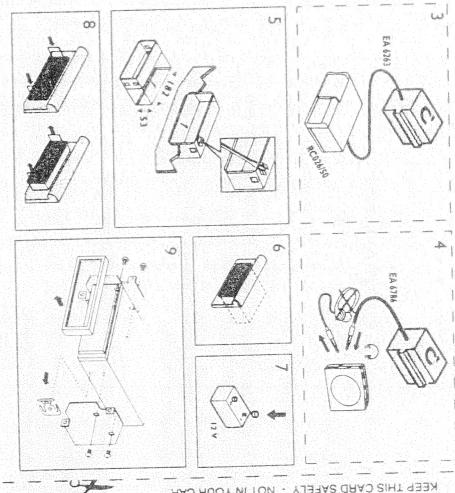
- No disc is inserted in the CD magazine.

CARE OF DISCS

- Avoid making fingerprints on the disc.
- Put the disc back in its box immediately after eject it, to protect the disc from damage and dust.
- Never expose disc to heat or direct sunlight.

11 10

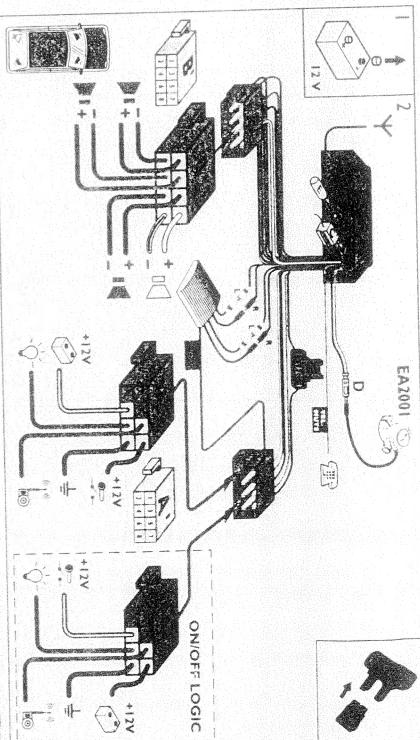
CONNECTOR C	DESCRIPTION
13	D2B+
14	D2B-
15	D2B GROUND
16	REM+
17	CDC+
18	LINE IN LEFT
19	LINE IN GROUND
20	LINE IN RIGHT



PHILIPS

Security Card

Philips Car Systems

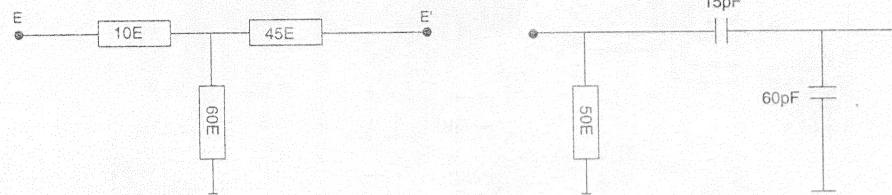


SERVICE HINTS

FM and AM search levels are stored in the EEPROM. Service code of the EEPROM will be released in the next service newsletter. When you change the tuner module or the EEPROM, in order not to affect the performance of the set, you will need to reprogramme the FM and AM search levels using this service routine.

Make sure that you connect the following 75E FM and AM dummy antenna matching unit before reprogramming the search levels.

Use Dummy aerials according Philips PQR DFT-009-0561:
FM : -6dB



FM SEARCH LEVEL ALIGNMENT :

1. Input signal as below for LO (Local) search level alignment via the FM Dummy antenna:
LO SEARCH LEVEL : FM 93MHz, E= 240uV
2. Tune in and store 93.0MHz into Preset 1 on BAND FM3.
3. Switch off the set.
4. Press and hold both "BAND" and "AST" key while turning on the set.
Display shows : "93.0 000F"
5. Press Preset 1 for more than 2 seconds (you will hear a bleep) to store the LO (Local) search level.
6. Input signal as below for DX (Distance) search level alignment via the FM Dummy antenna:
DX SEARCH LEVEL : FM 93.0MHz, E = 15uV
7. Press Preset 2 for more than 2 seconds (you will hear a bleep) to store the DX (Distance) search level
8. Press any key briefly (other than BAND) to exit this service routine.

AM SEARCH LEVEL ALIGNMENT :

1. Input signal as below for LO (Local) search level alignment via the AM Dummy antenna :
LO SEARCH LEVEL : AM 531kHz, E= 350uV
2. Tune in and store 531kHz into Preset 1 on BAND AM1.
3. Switch off the set.
4. Press and hold both "BAND" and "AST" key while turning on the set.
5. Press BAND to change into AM1
Display shows : "531 000F"
6. Press Preset 1 for more than 2 seconds (you will hear a bleep) to store the LO (Local) search level.
7. Input signal as below for DX (Distance) level alignment via the AM Dummy antenna :
DX SEARCH LEVEL : AM 531kHz, E= 70uV
8. Press Preset 2 for more than 2 seconds (you will hear a bleep) to store the DX (Distance) search level.
9. Press any key briefly (other than BAND) to exit this service routine.

Service Test Mode :

Tuner reception check (Test mode)

Press Preset 2 and Preset 4 together to activate tuner test mode.

Display shows : " XXXX QRMF "

XXXX - 4 figures of tuned frequency

Q- Selected frequency quality

R- Best AF quality

M - Multipath

range 0 ... F hexadecimal
(0 = NO Multipath)

F- Field strength

range 0 F hexadecimal
(F = Good signal strength)

Keyboard Test

This test is called by switching the set ON while keeping pressed the preset 3 key. A different number will appear each time you press a new key (e.g. Preset 3 corresponds to T03). This test can be exited at any moment by switching off the set.

PCS 77 867

LCD Display Test

Press Preset 1 and Preset 5 together to activate LCD display test. All segments of the LCD are lighted up.

Software release status

CHECKSUM FOR SOFTWARE RELEASE 1.0 :

0070 (RC549/519)

433D (RC624/604)

Press Preset 1 and Preset 6 together to see the software release status

Display shows : "XXXX H"

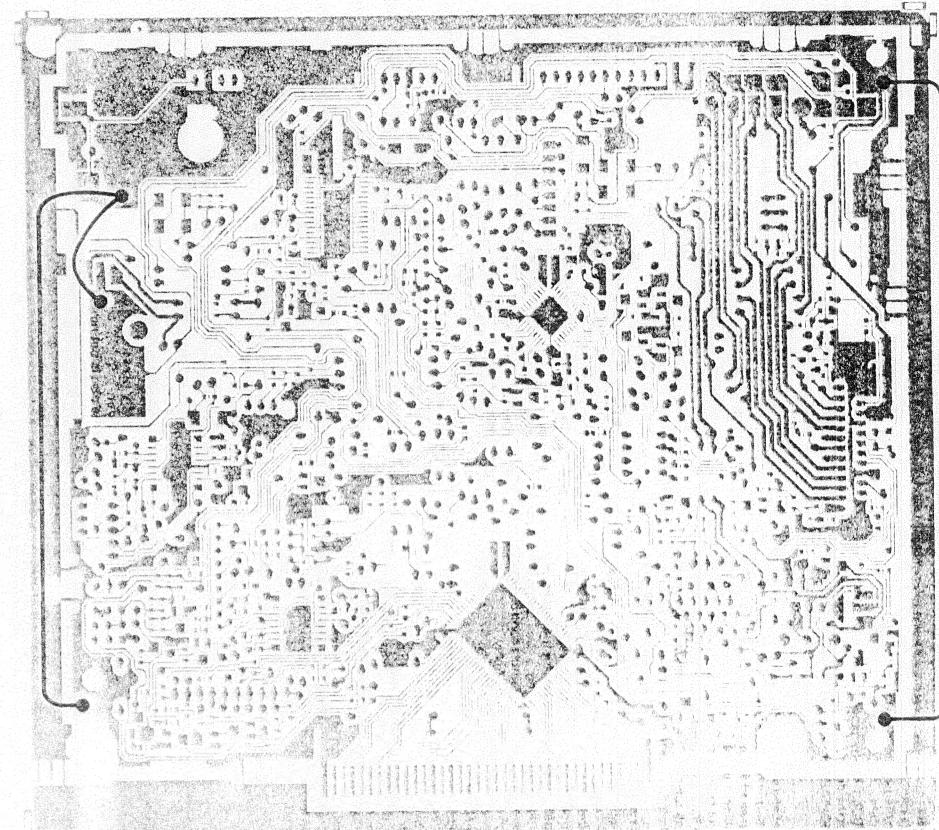
XXXX = Checksum

H = Hexa. decimal

CONNECTING THE PCB FOR MEASUREMENT ON THE COPPER SIDE

1. Assemble back the heat sink for the power ic to prevent overheating.
2. Connect wire as shown.
3. Reconnect the cable for the front assembly and the tapedeck.

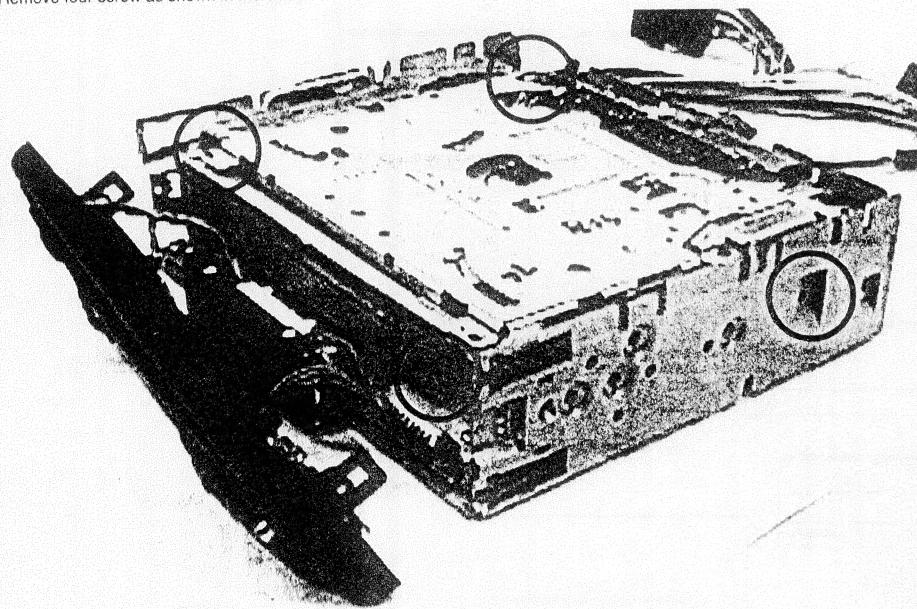
Note: Remember to disconnect wire before encasting.



SERVICE HINTS

To remove the CDMM2 mechanism :

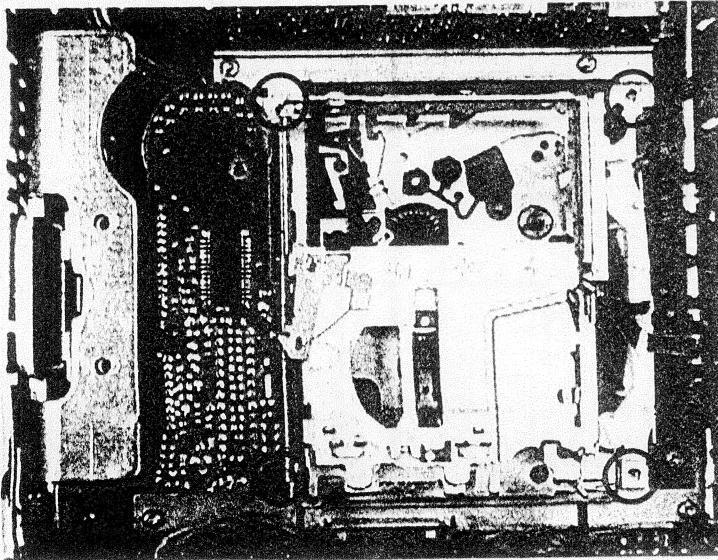
1. Detach the ornamental front from the frame.
2. Remove four screw as shown in the circle.



SERVICE HINTS

To remove the SCA mechanism :

1. Remove four screw as shown in the circle.



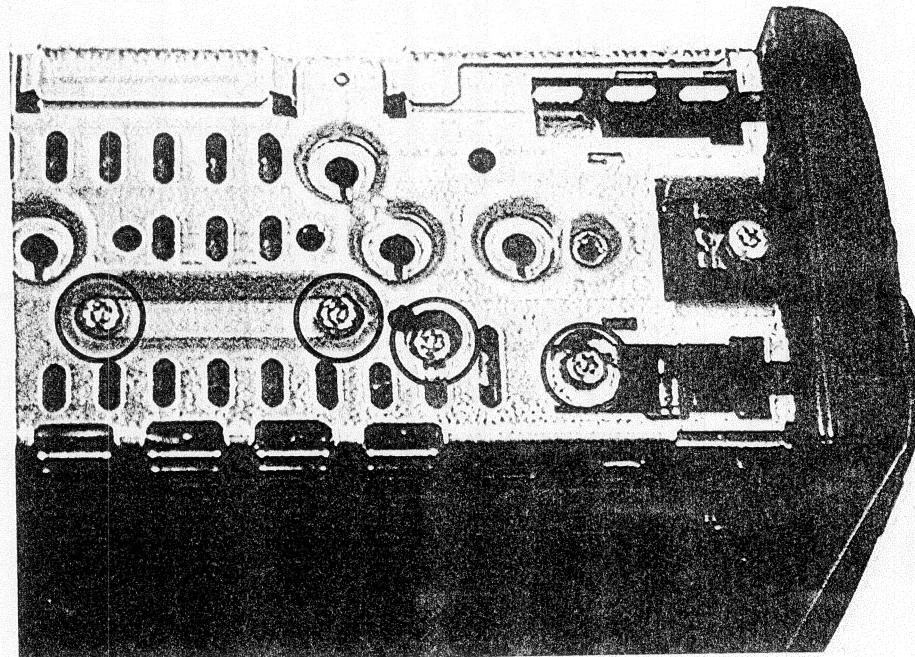
SERVICE HINTS

To remove the Power IC heat sink :

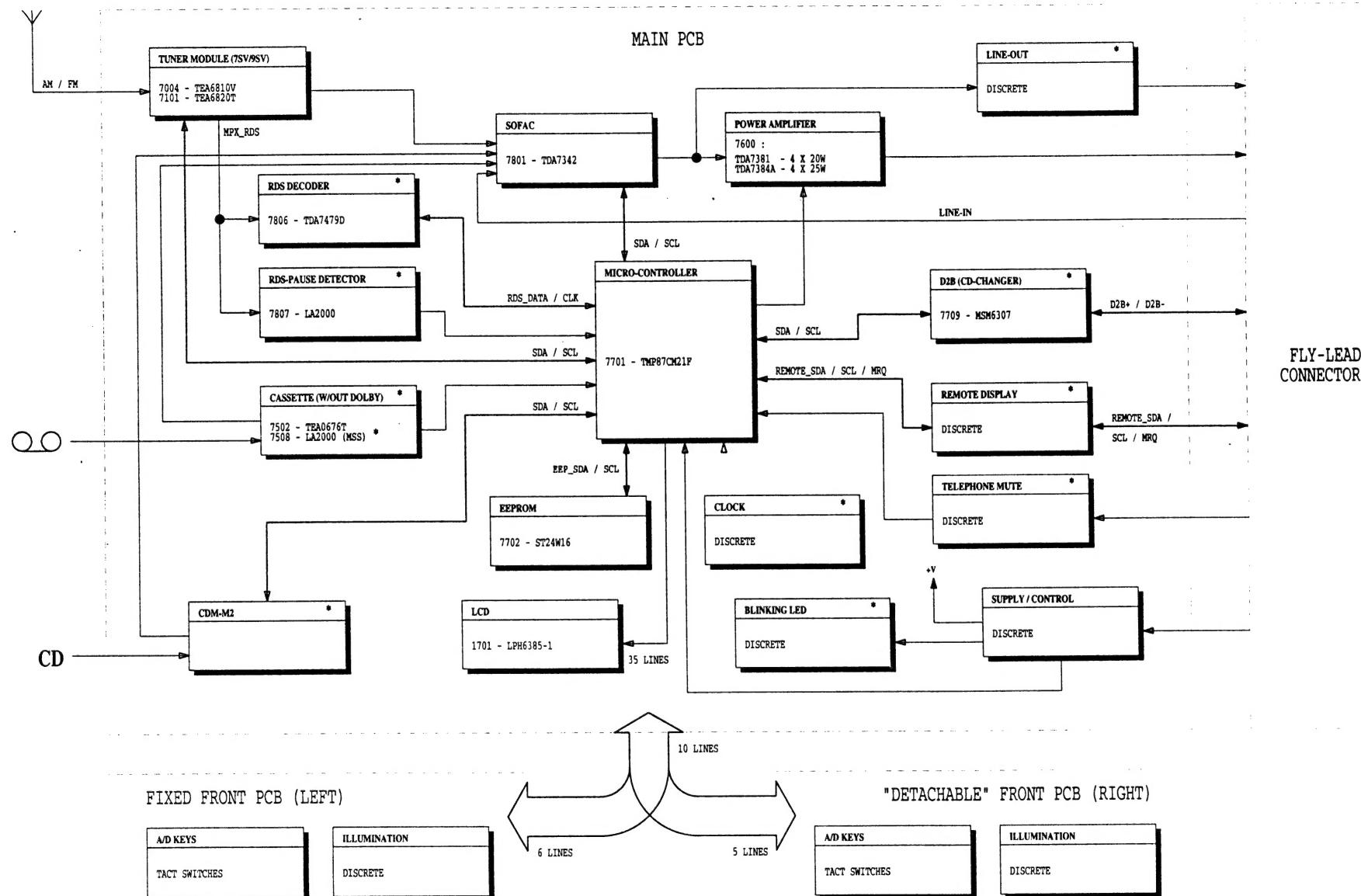
Remove four screw as shown in the circle.

How to remove the Power IC heat sink without damaging the solder paste?

There is a solder paste on the Power IC which helps to improve heat transfer from the power ic to the heat sink. To prevent damage to the solder paste, remove the heat sink only when the set has cool down.

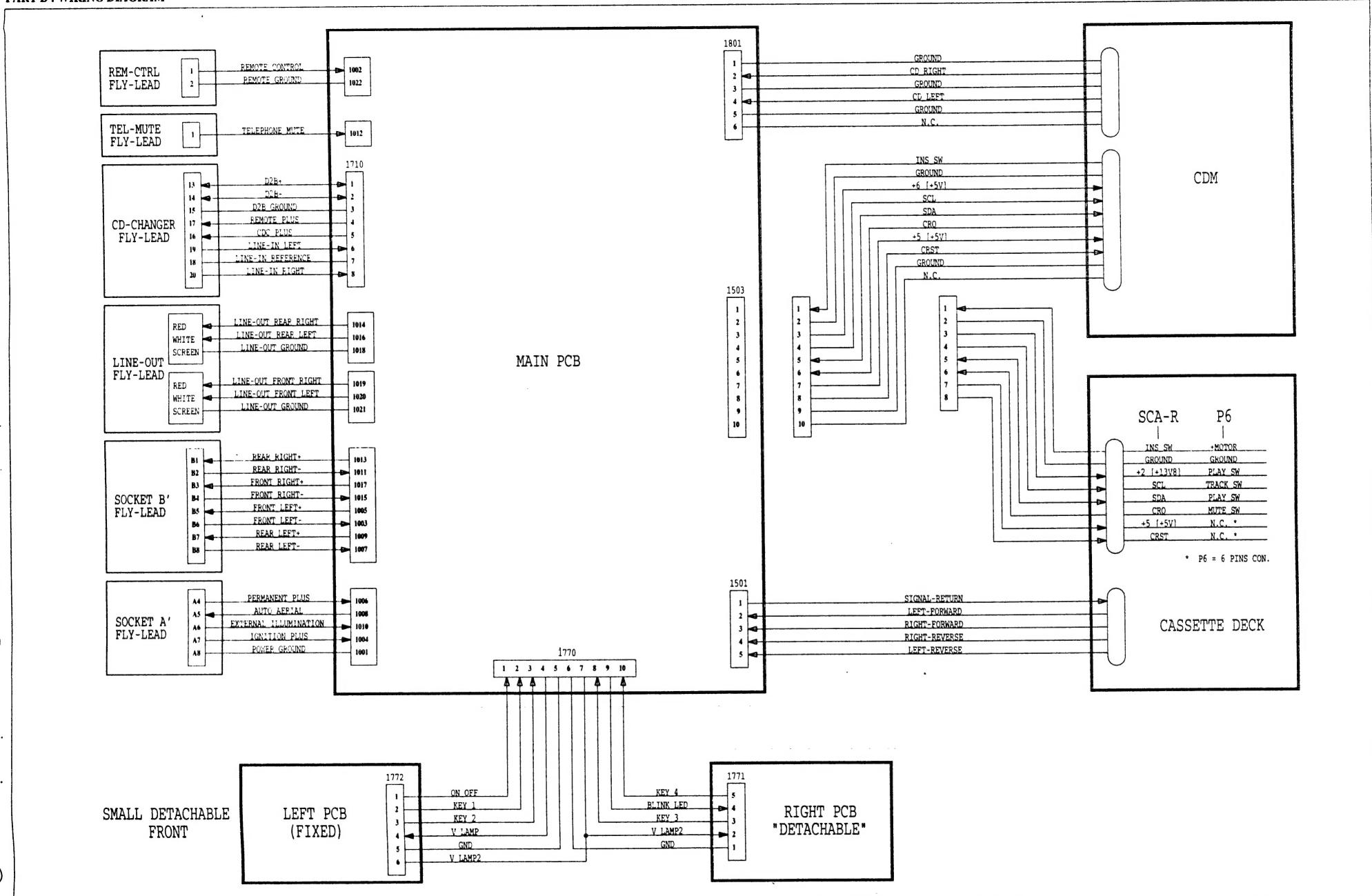


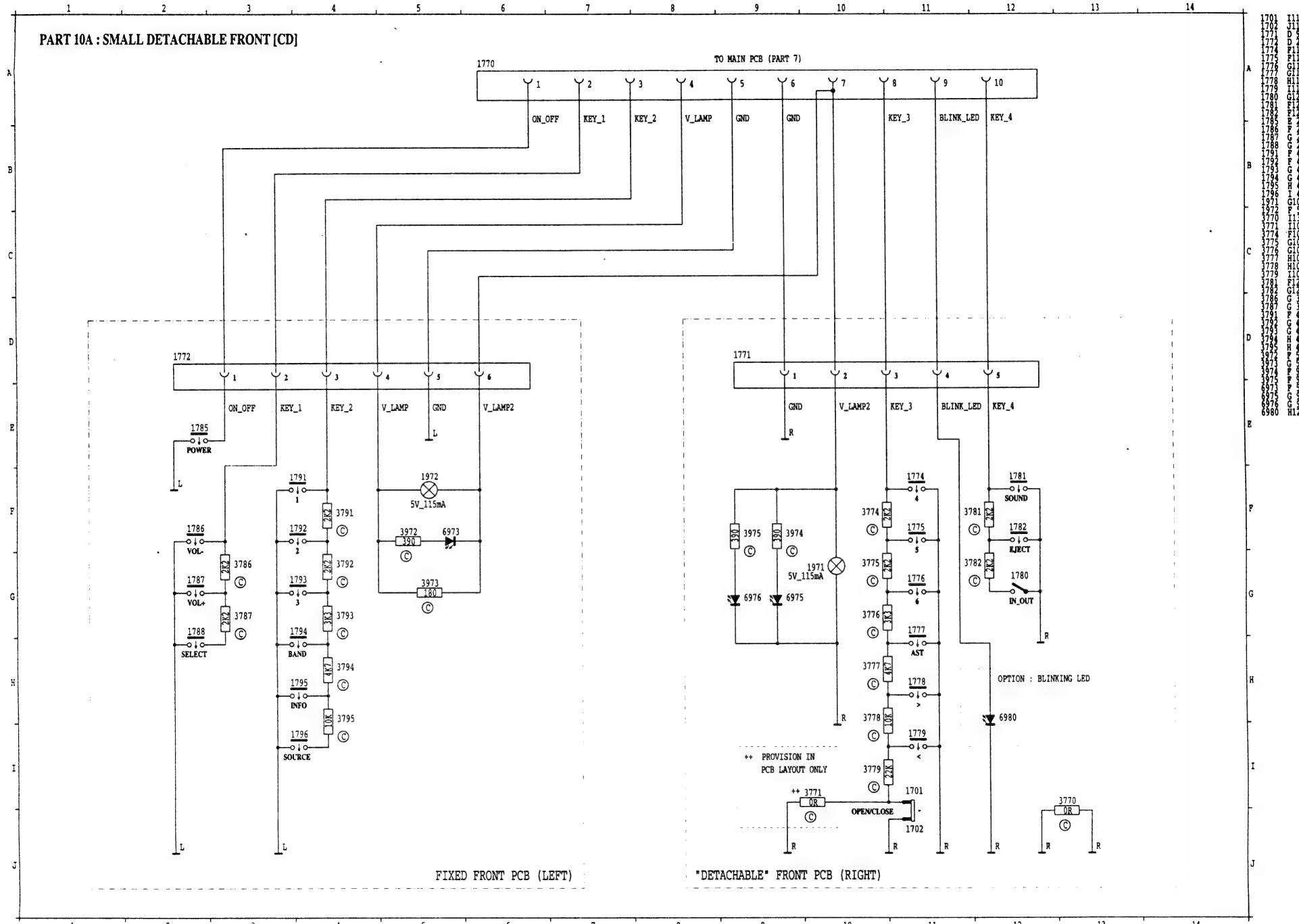
PART A : ELECTRICAL ARCHITECTURE



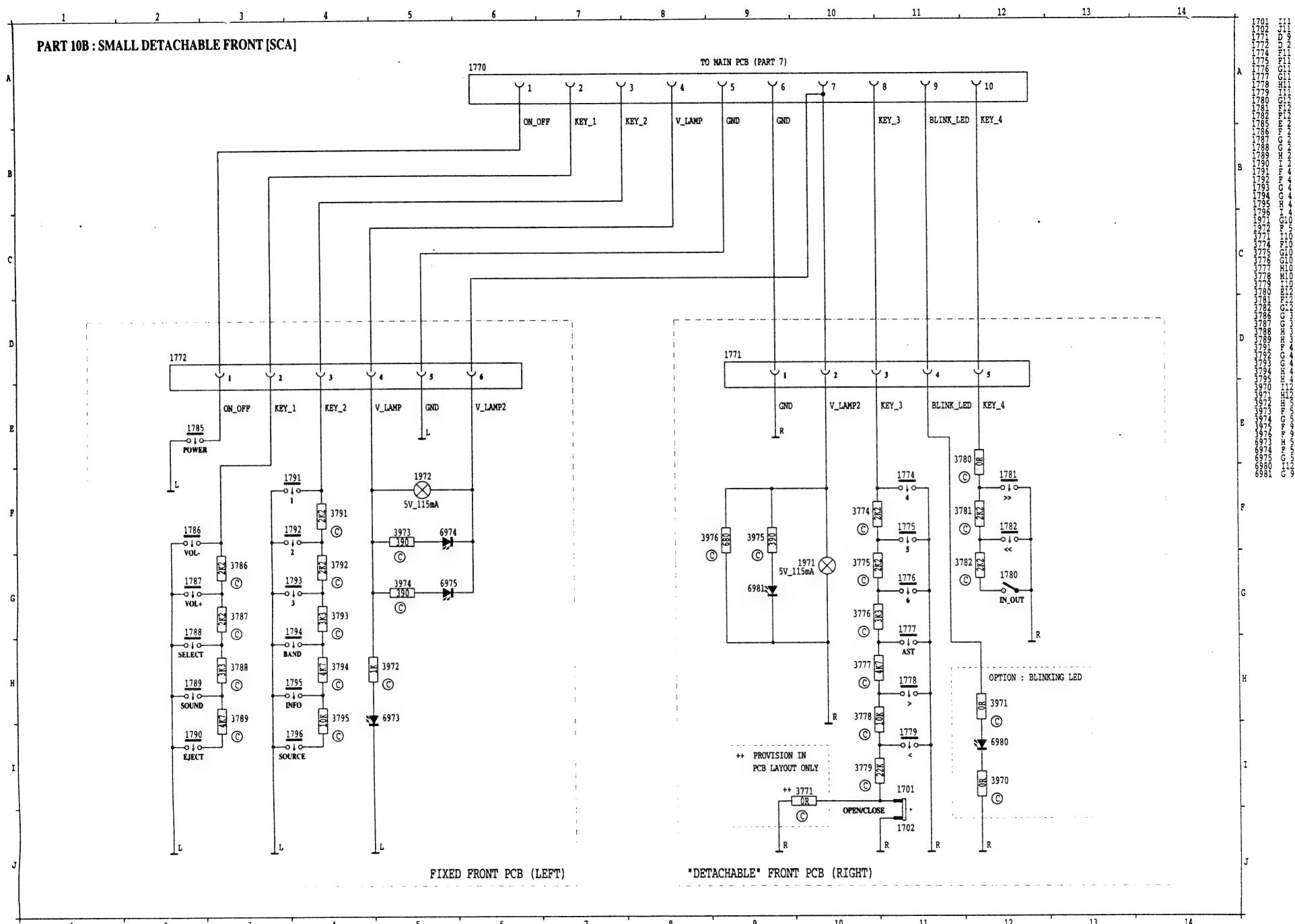
* = OPTION

PART B : WIRING DIAGRAM

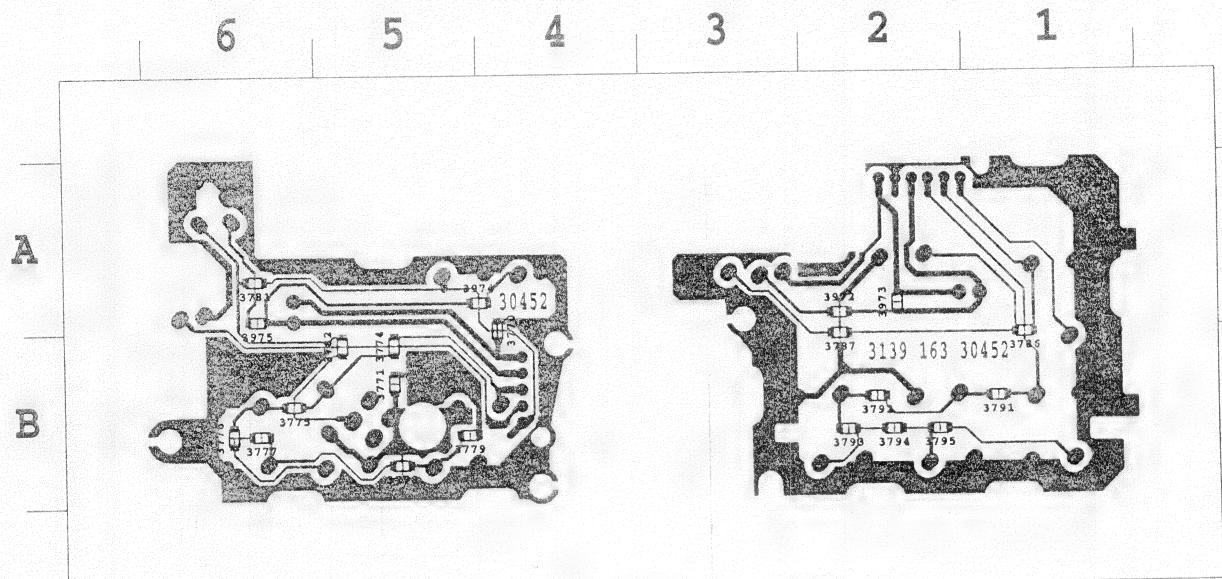




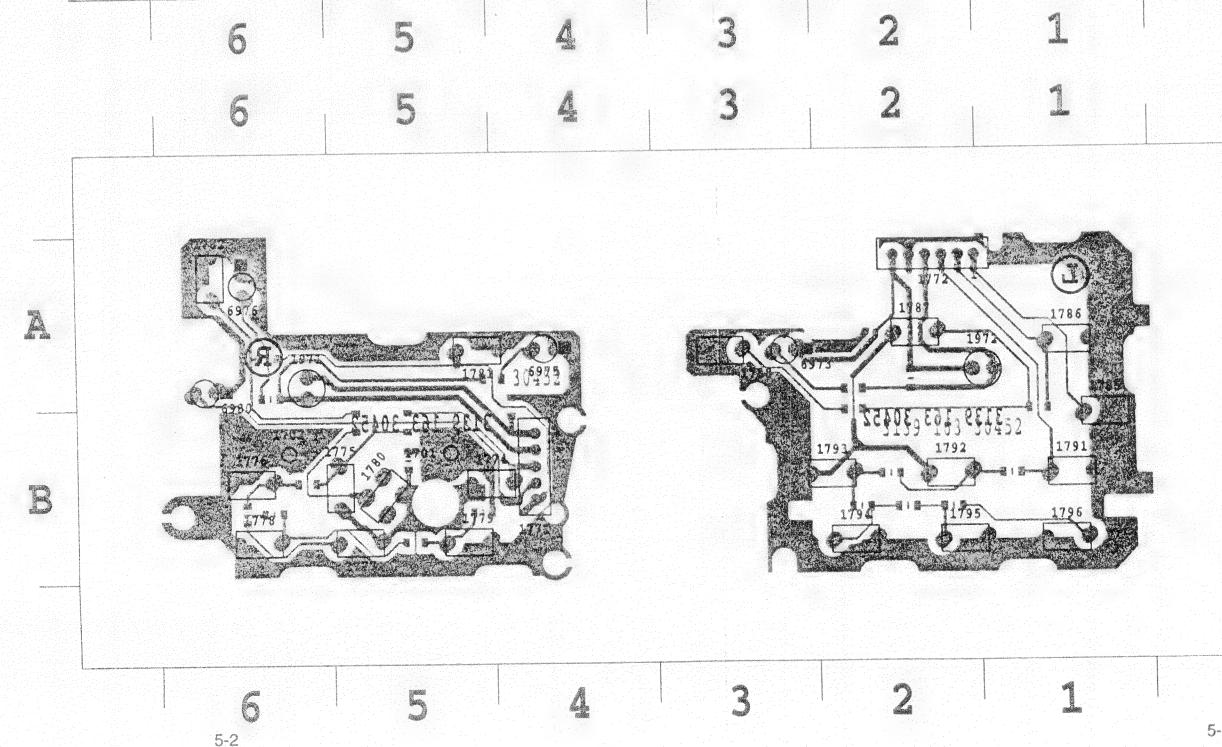
PART 10B : SMALL DETACHABLE FRONT [SCA]



FRONT BOARD (CD)



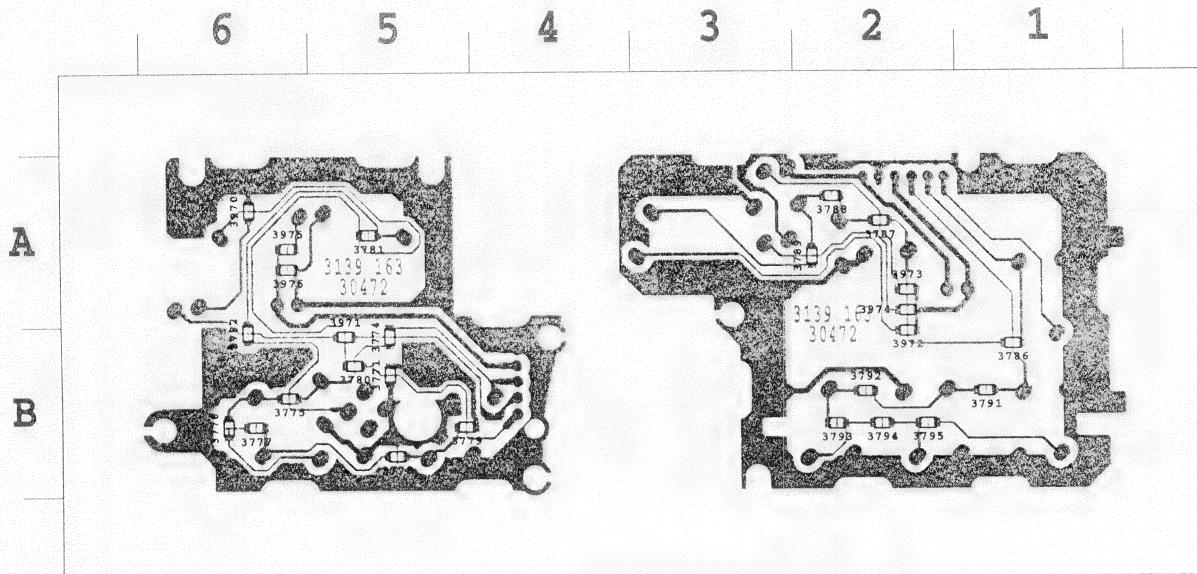
3770 A 4
3771 B 5
3774 B 5
3775 B 6
3776 B 6
3777 B 6
3778 B 5
3779 B 5
3781 A 6
3782 B 5
3786 B 1
3787 B 2
3791 B 1
3792 B 2
3793 B 2
3794 B 2
3795 B 2
3972 A 2
3973 A 2
3974 A 5
3975 A 6



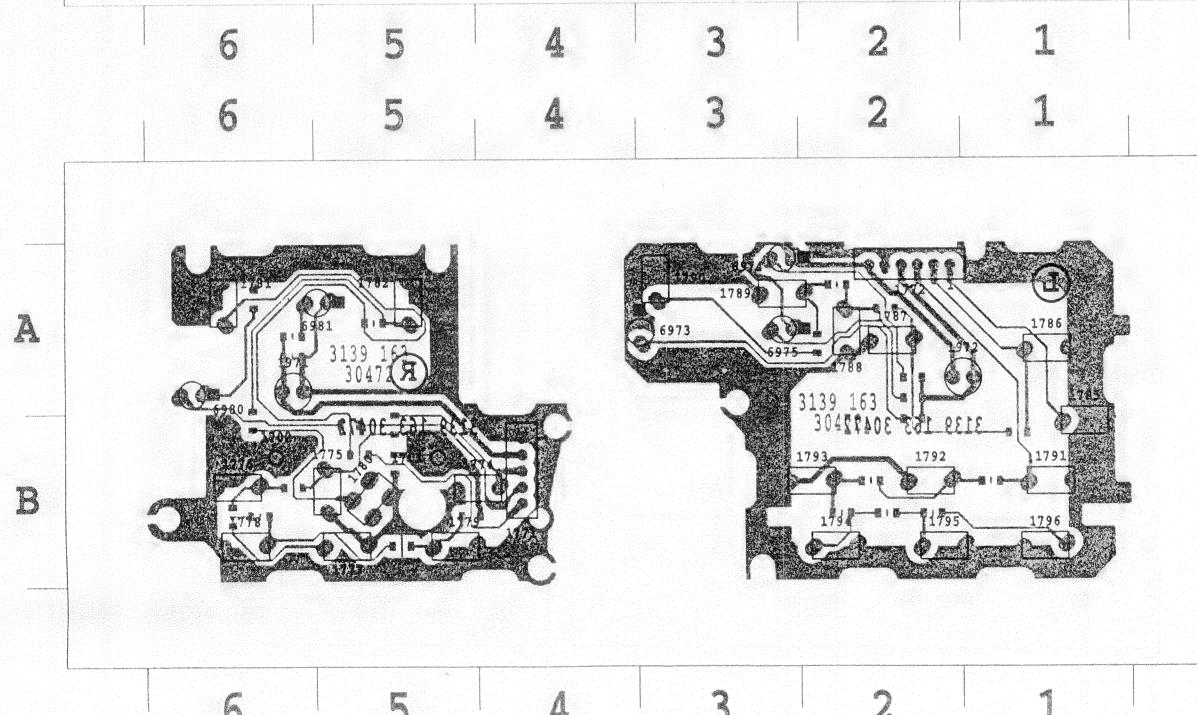
1701 B 5
1702 B 6
1771 B 4
1772 A 2
1780 B 5
1971 A 6
1972 A 1

A
B

FRONT BOARD (SCA)



3771	B	5	3973	A	2
3774	B	5	3974	A	2
3775	B	6	3975	A	6
3776	B	6	3976	A	6
3777	B	6			
3778	B	5			
3779	B	5			
3780	B	5			
3781	A	5			
3782	B	6			
3786	E	1			
3787	A	2			
3788	A	2			
3789	A	2			
3791	B	1			
3792	B	2			
3793	B	2			
3794	B	2			
3795	B	2			
3970	A	6			
3971	B	5			
3972	B	2			

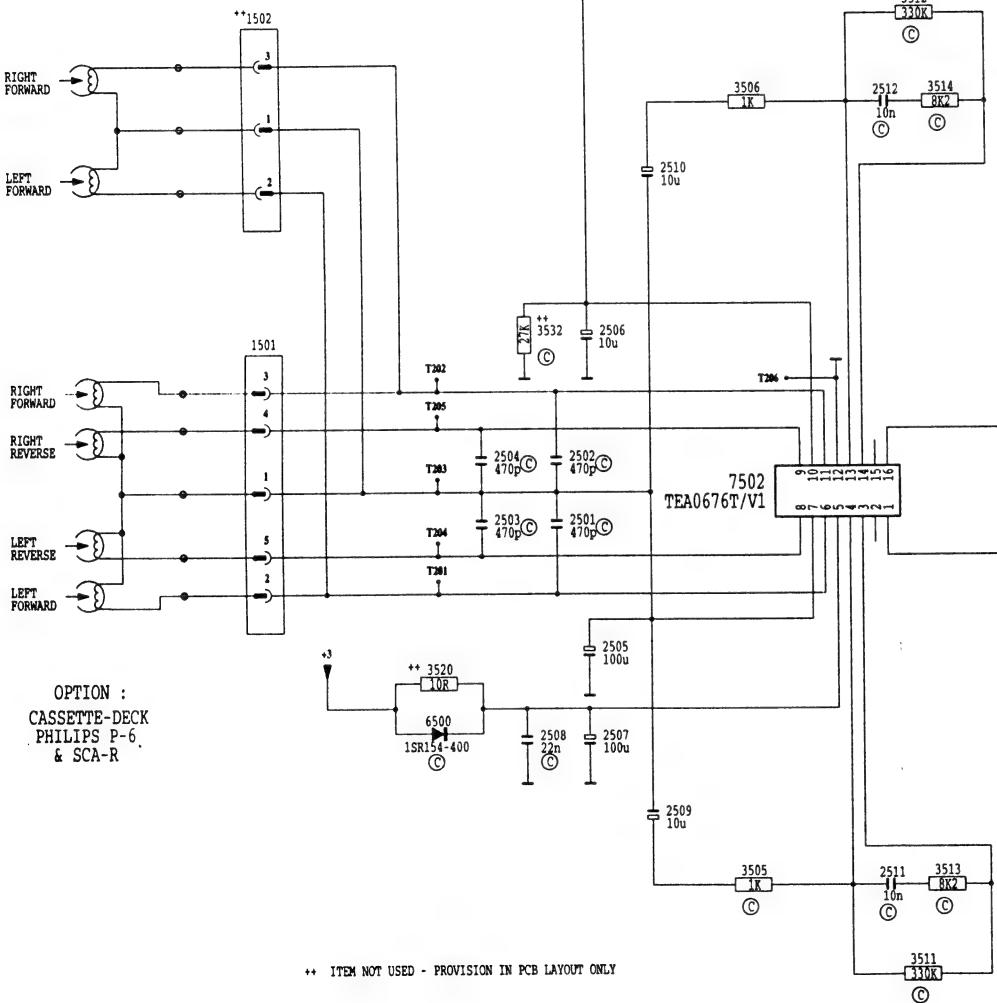


1701	B	5
1702	B	6
1771	B	4
1772	A	2
1780	B	5
1971	A	6
1972	A	1

PART 2 : CASSETTE PRE-AMP, DOLBY & MSS (MAIN PCB)

THIS PART IS DELETED IN CD VERSIONS

OPTION :
CASSETTE-DECK
SHINWA CDS-36
& CDS-101



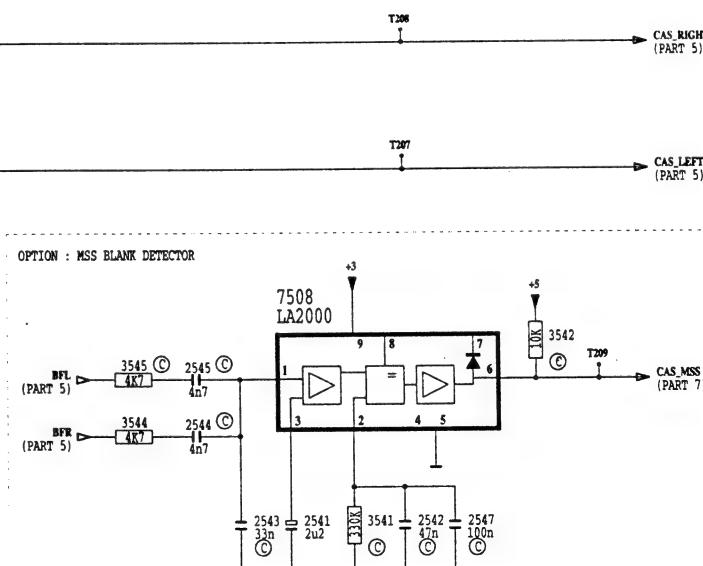
OPTION :
CASSETTE-DECK
PHILIPS P-6
& SCA-R

++ ITEM NOT USED - PROVISION IN PCB LAYOUT ONLY

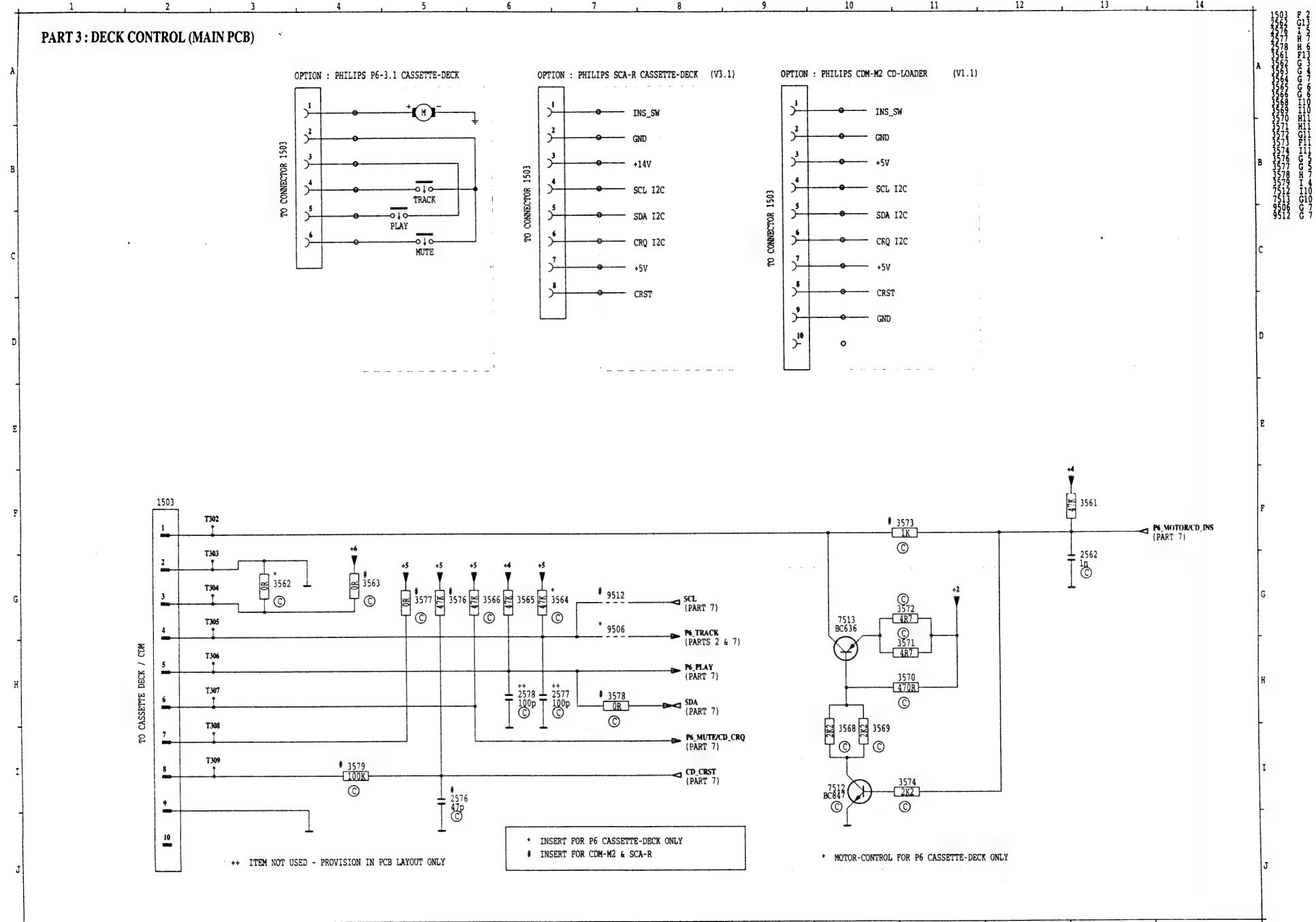
**Voltage measured in
CASSETTE mode**

7502 TEA0676T/V1

CASSETTE Model		1	4.3V
7508	LA2000	2	N.C.
1	2.1V	3	4.2V
2	7.5V	4	4.2V
3	2.1V	5	8.4V
4	N.C.	6	4.2V
5	OV	7	4.2V
6	5V	8	4.2V
7	N.C.	9	4.2V
8	N.C.	10	3.2V
9	8.5V	11	4.2V
		12	OV
		13	4.2V
		14	4.2V
		15	N.C.

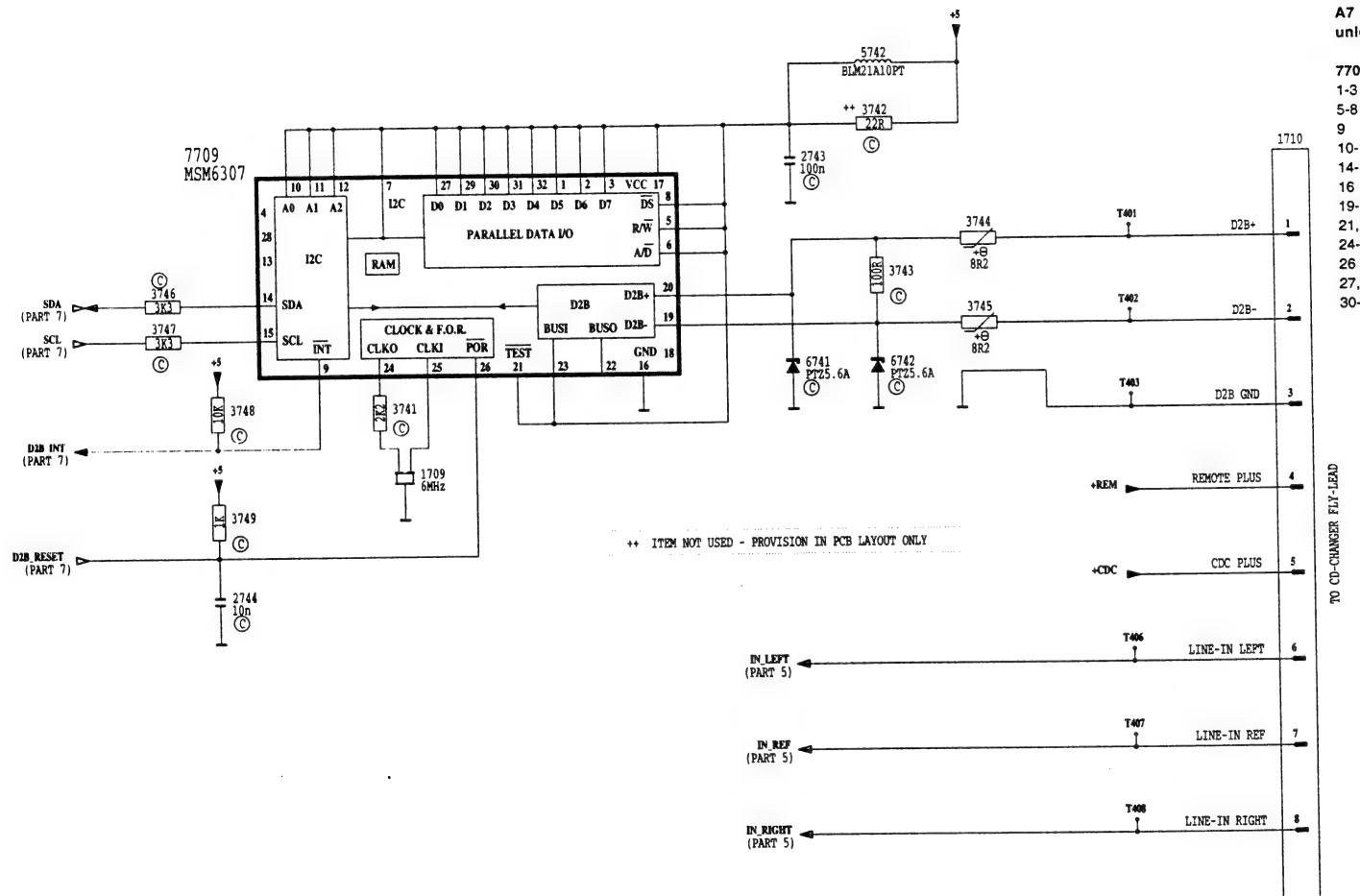


PART 3 : DECK CONTROL (MAIN PCB)



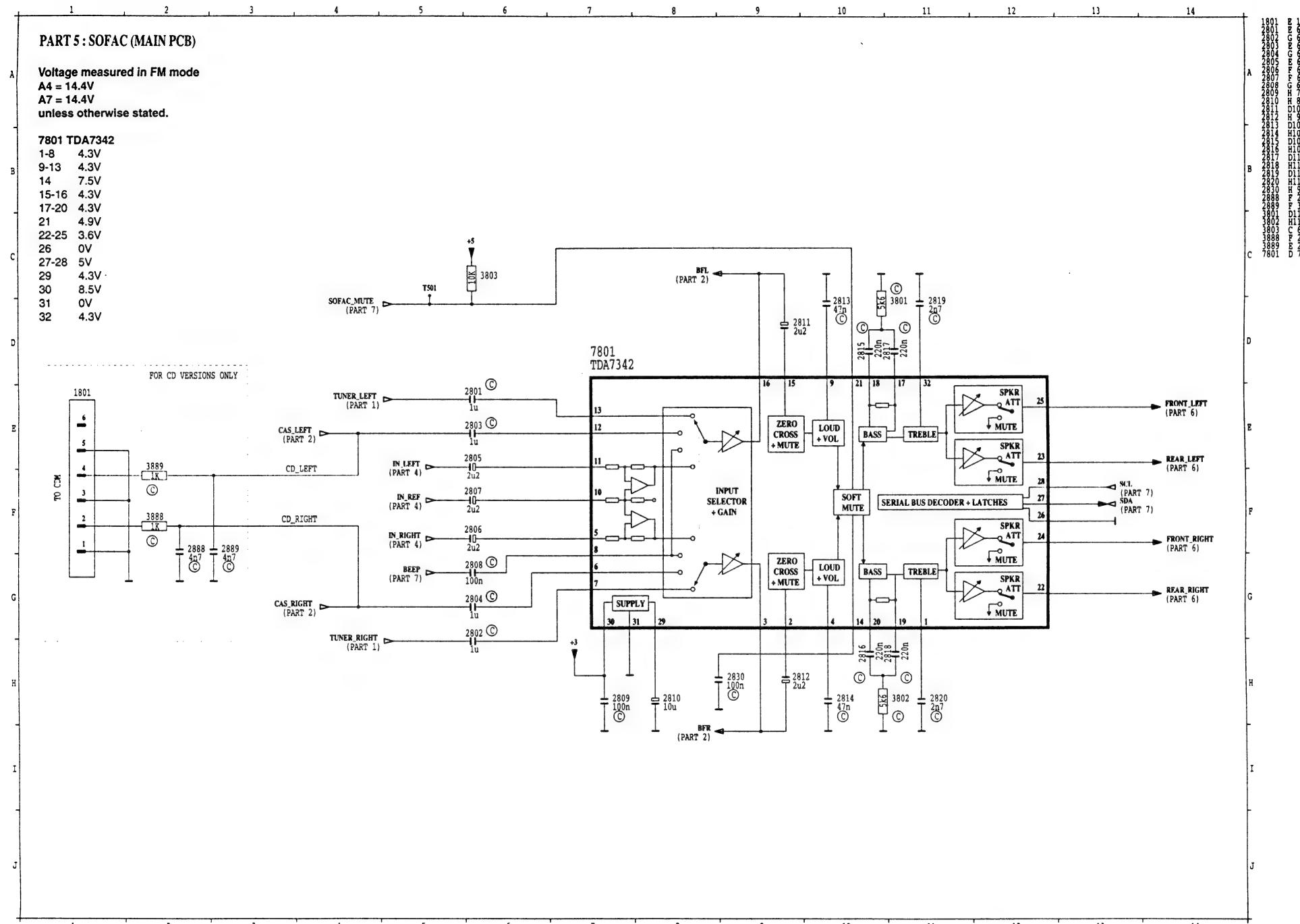
PART 4 : CD-CHANGER CONTROL / CDCC (MAIN PCB)

N.B. THIS PART IS AN OPTION.



Voltage measured in FM mode
A4 = 14.4V
A7 = 14.4V
unless otherwise stated.

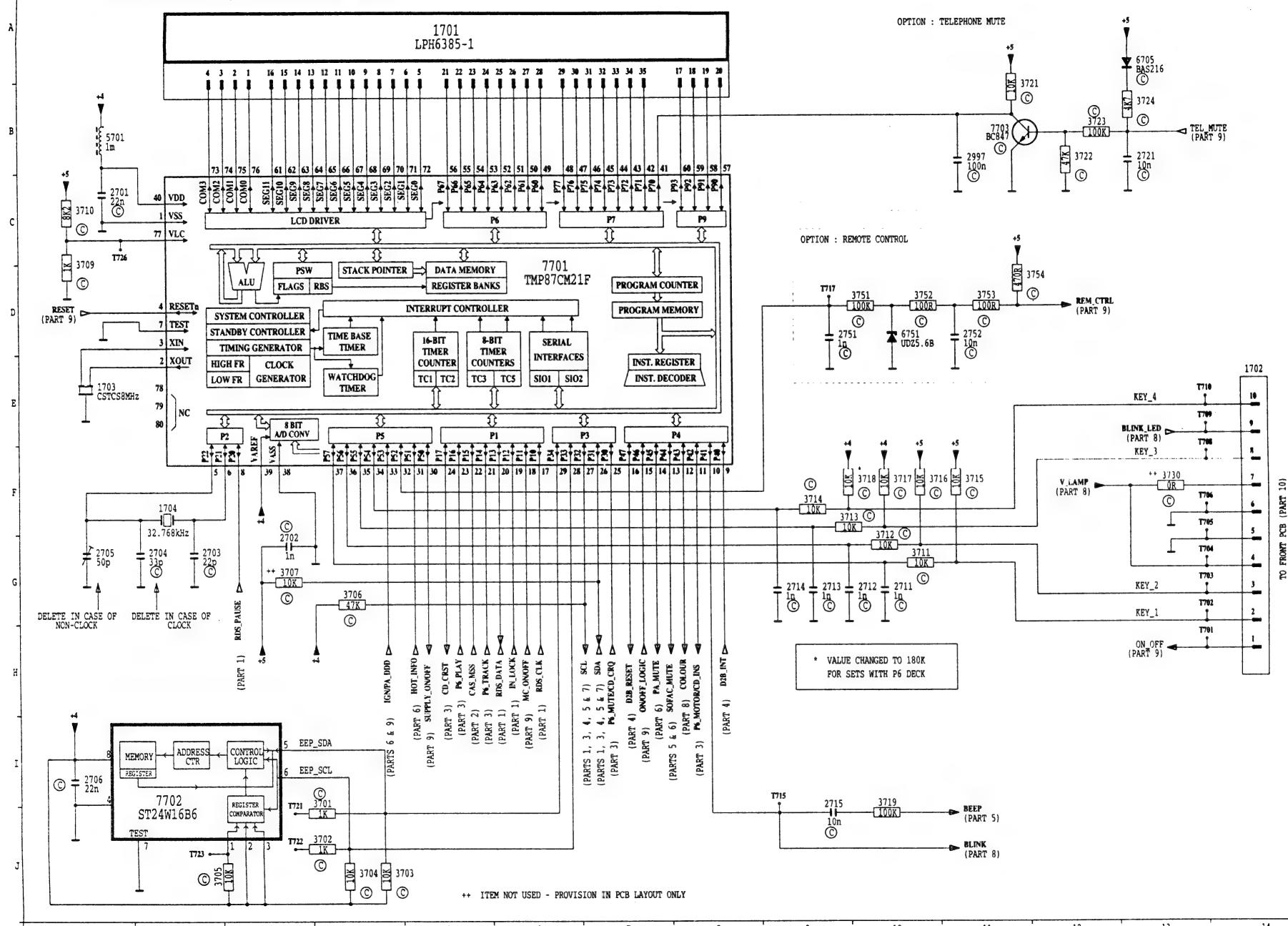
7709 MSM6307
 1-3 5V
 5-8 5V
 9 5V
 10-12 5V
 14-15 5V
 16 GND
 19-20 2.5V
 21, 23 5V
 24-25 2.3V
 26 5V
 27,29 5V
 30-32 5V



2801	E 1
2801	E 6
2802	G 6
2803	G 6
2804	G 6
2805	G 6
2806	G 6
2807	F 6
2808	G 6
2809	H 6
2810	H 6
2811	D 10
2812	H 9
2813	D 10
2814	H 10
2815	D 10
2816	H 10
2817	F 9
2818	H 11
2819	D 11
2820	H 11
2830	H 11
2888	F 2
2889	F 2
3801	C 6
3888	E 2
3889	E 2
7801	D 7

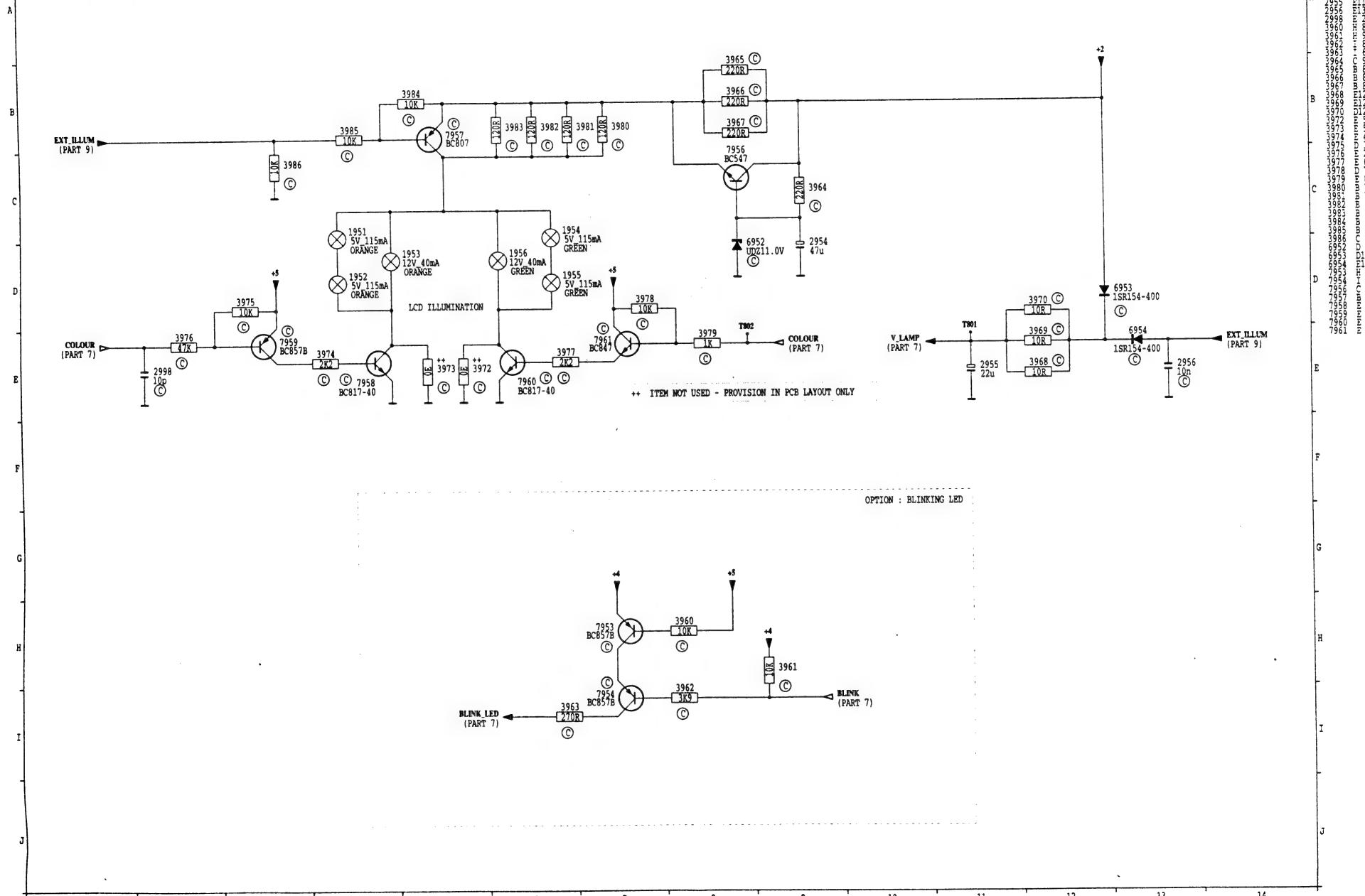
A D E G H I J

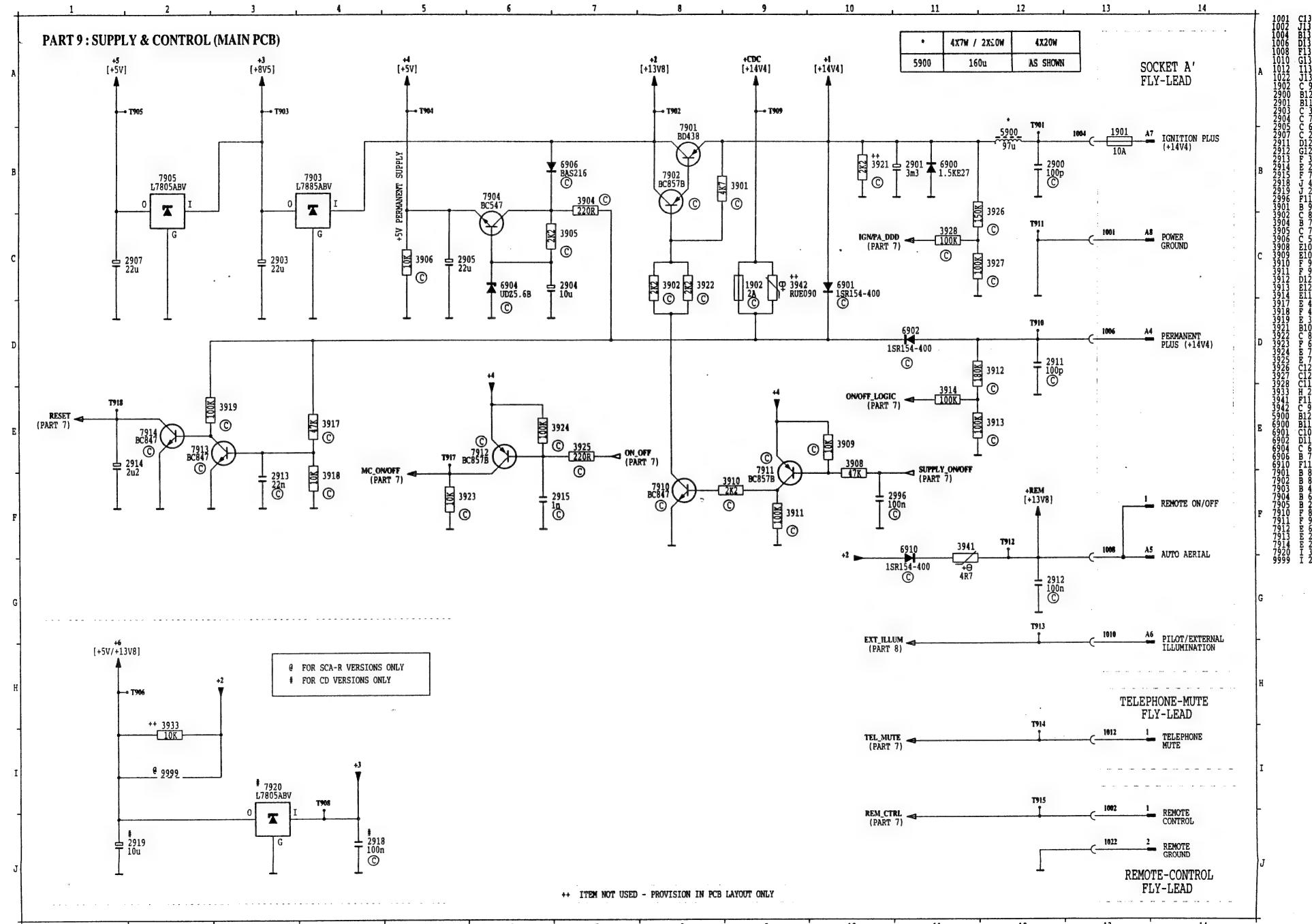
PART 7 : MICRO-CONTROLLER, LCD & EEPROM (MAIN PCB)



++ ITEM NOT USED - PROVISION IN PCB LAYOUT ONLY

PART 8 : LCD ILLUMINATION & BLINKING LED (MAIN PCB)





Some useful tips on Micro-processor			
Voltage and waveform are measured with A4 & A7 with 14.4V unless otherwise stated.			
(on) = Power on			
(off) = Power off			
Pin No.	Name	I/O	Function description
1	VSS	I	uP GND
2			High clock oscillator
3			High clock oscillator
4	RESET	I	uP reset
5			Slow clock oscillator
6			Slow clock oscillator
7	TEST		
8	RDS_PAUSE		
9	D2B_INT	I	D2B interrupt from CDC
10	BEEP/BLINK	O	Roger Beep/Blink LED when detach is off.
11	P6_MOTOR/CD_INS	I/O	Insert Switch, to check if deck is loaded
12	COLOUR	O	Change display colour
13	SOFAC_MUTE	O	SOFAC IC mute
14	PA_MUTE	O	Power amplifier mute
15	ON/OFF LOGIC	I	To check existence of A4
16	D2B_RESET	O	D2B IC RESET
17	RDS_CLK	I	RDS clock
18	MC_ON/OFF	I	To check uP on/off status
19	IN_LOCK	I	
20	RDS_DATA	I/Q	
21	P6_TRACK	I	Side A or Side B
22	CAS_MSS	I	To detect blank pulse during next/previous track
23	SDA_I2C	I	Serial Data I2C
24	CD_CRST	I	Reset
25	P6_MUTE/CD_CRQ	I	Communication Request
26	SDA	I/O	Serial data
27	SCL	O	Serial clock
28	EEP_SCL		Eeprom serial clock
29	EEP_SDA		Eeprom serial data
30	SUPPLY_ON/OFF	O	
31	HOT_INFO	I	
32	REM_CTRL	I	For remote control EA2001
33	IGN/PA_DDD		To check existence of A7
34	KEY_4		
35	KEY_3		
36	KEY_2		
37	KEY_1		
38	VASS		0V
39	+4		Permanent supply
40	VDD	I	uP supply
41	TEL_MUTE	I	TEL_MUTE (Phone "LO")
		I	TEL_MUTE (Phone "HI")
42-76			5V (Set muted, display shows "TEL CALL"). 0V (set play as normal)
77	VLC	I	5V (set play as normal). 0V (Set muted, display shows "TEL CALL").
78-80	NC		LCD driver output
		I	GND
			0V

ADDITIONAL FUNCTION CHECK:

Item	Input	Output
External illumination +	Set off Inject +12V at pin A6	Power pilot light turns ON.
Auto Antenna	Connect a resistor of 25Ω from A5 to GND. Switch on set.	Voltage drop between pin A7 & A5 < 1V.
Line-out	Tuner set to FM mode, 97MHz Inject 97Mhz, 22.5kHz dev. E'=1mV, 1kHz mod. Set volume setting at 1Vrms at speaker output.	Measure at Line-out Flyleads a 1kHz AF signal of 200mVrms.

POWER IGNITION CHECK :

Steps	Permanent (A4)	Ignition (A7)	Action	Observation
1	ON	ON	Turn set ON with power key.	Set is turn on.
2	ON	OFF	Switch OFF ignition	Set switches off.
3	ON	ON	Switch ON ignition.	Set will be on.

TUNER CHECK:

IC96 7SV/9SV module is a Non repairable module, complete spare parts as an module is readily available. For general check, please refer to the manual " General Check & Alignment procedures for Car Systems" 4822 725 25456. Use a matching circuit (artificial aerials) with $Z_i = 75\text{ohm}$.

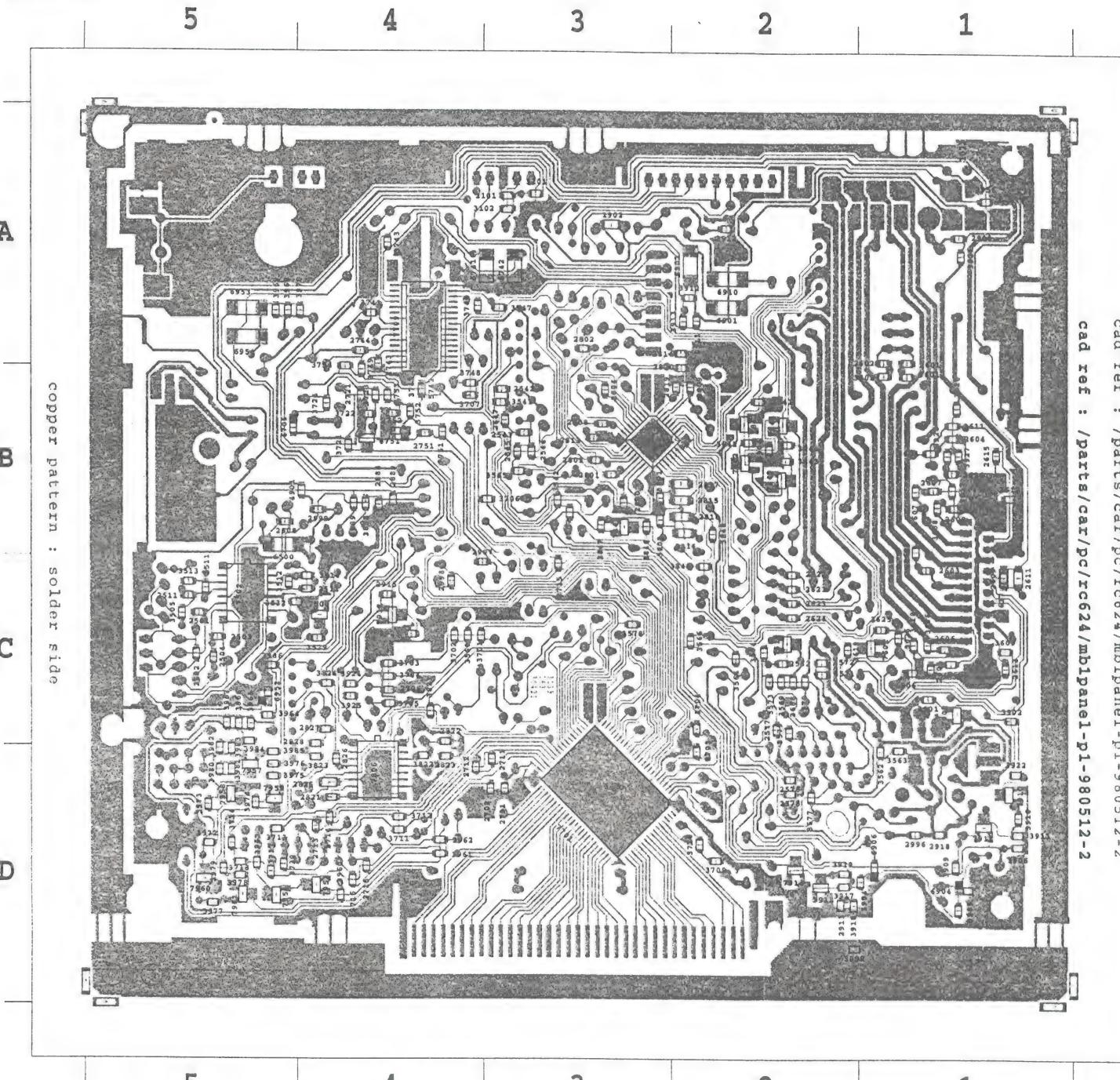
CHECK	TUNE IN	OUTPUT
$\alpha - 3 \text{ dB}$	FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz FM 93MHz, 8uV, Dev=22.5kHz, f mod. = 1kHz	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3, B5 = -3dB
SDS 10dB Crosstalk	FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz FM 93MHz, 150uV, Dev=22.5kHz, f mod. = 1kHz (L)	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3 = -10dB
Stereo Channel separation	FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz (L)	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3 \leq -21dB
26dB SNR	FM 93MHz, 4.5uV, Dev=22.5kHz, f mod. = 1kHz FM 93MHz, 4.5uV, Dev=22.5kHz, unmodulated	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3, B5 \leq -26dB
FM Demodulated level	FM 93MHz, 1mV, Dev=22.5kHz, f mod. = 1kHz	Pin 13 of Tuner module = 280mV (AC) \pm 3dB Pin 7 of IC96 = 215mV (AC) \pm 2dB
FM Search Sensitivity	FM 93MHz, unmodulated	DX : 10uV $<$ E $<$ 20uV LO : 190uV $<$ E $<$ 290uV
AM Demodulated level	AM 1053kHz, 1mV, m=30%, f mod. = 1kHz	Pin 13 of Tuner module = 280mV (AC) \pm 2dB
26dB SNR	MW 1053kHz, 30uV, m=30%, f mod. = 1kHz MW 1053kHz, 30uV, unmodulated	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3, B5 \leq -26dB
26dB SNR	LW 207kHz, 38uV, m=30%, f mod. = 1kHz LW 207kHz, 38uV, unmodulated	Conn. Block B3, B5 = 0dB (reference level) Conn. Block B3, B5 \leq -26dB
AM Search Sensitivity	AM 1053kHz, unmodulated	DX : E = 14uV LO : E = 70uV

CLOCK ALIGNMENT :

Set T722 (EEPROM-SCL) TO GND and turn the set on to do clock alignment.

Signal	Test point	Frequency	Aligned with
CLK	(T108) Pin 20 of main uP	1024Hz	2705
GND	(T106) Power supply Gnd		

MAIN PCB

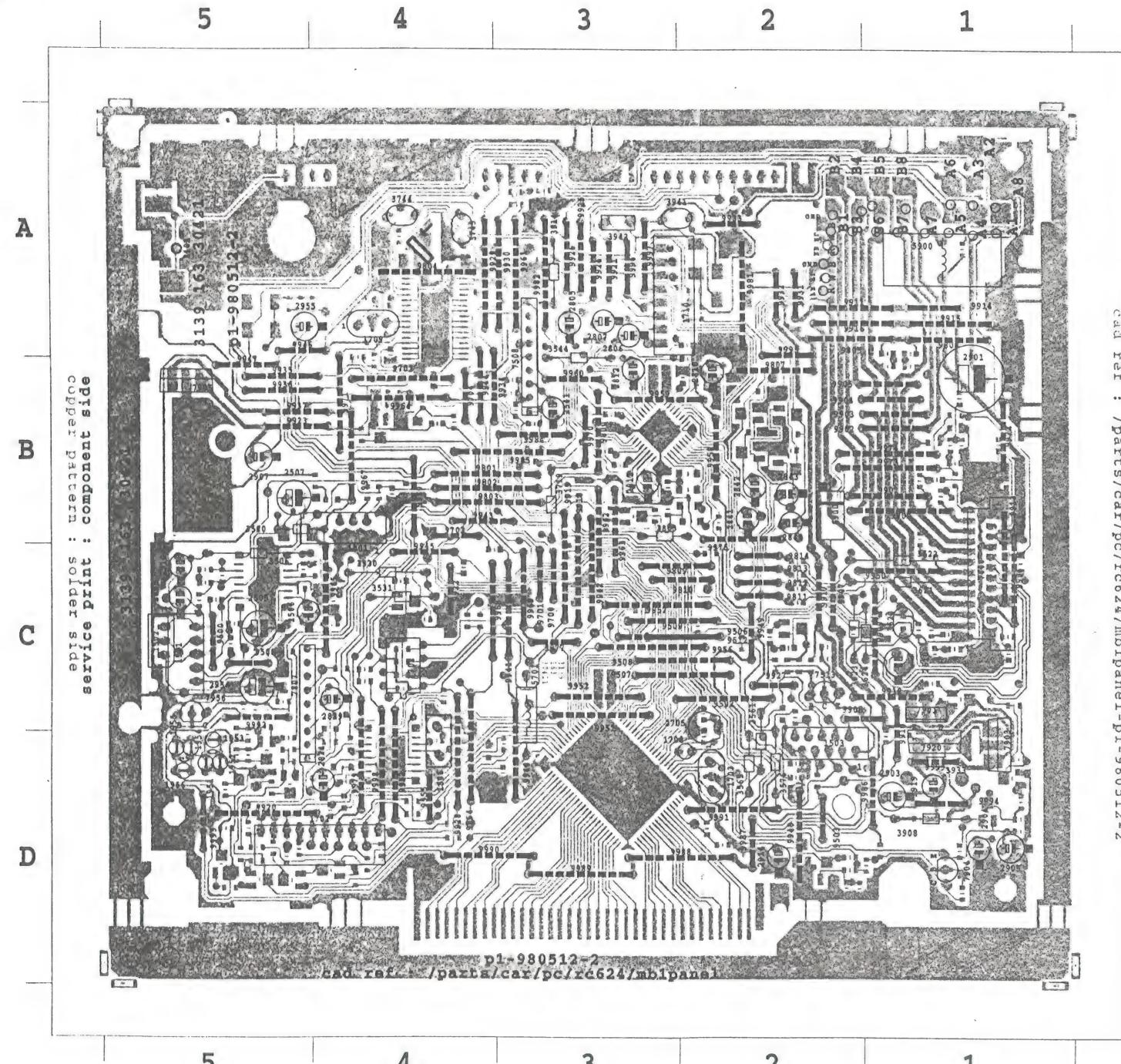


copper pattern : solder side

cad ref : /parts/car/pc/rc624/mbilpanel-p1-980512-2
 cad ref : /parts/car/pc/rc624/mbilpanel-p1-980512-2

3999 D 2	2817 B 2	3626 C 1	3924 C 4	7912 C 4
---	2818 B 2	3701 C 4	3925 C 4	7913 D 2
1020 A 2	2819 B 2	3702 C 4	3926 B 1	7914 D 2
1022 A 1	2820 B 2	3703 C 4	3927 B 1	7953 D 4
1902 A 3	2821 D 4	3704 C 4	3928 B 1	7954 D 5
2101 A 3	2822 C 4	3705 C 4	3960 D 4	7957 D 5
2501 C 5	2823 D 4	3706 B 3	3961 D 4	7958 D 5
2502 C 5	2825 D 4	3707 B 4	3962 D 4	7959 D 5
2503 C 5	2826 D 4	3709 D 2	3963 D 5	7960 D 5
2504 C 5	2827 C 4	3710 D 2	3964 C 5	7961 D 5
2508 B 5	2828 C 4	3711 D 4	3965 C 5	
2511 C 5	2830 B 3	3712 D 4	3966 C 5	
2512 C 4	2888 B 4	3713 D 5	3967 C 5	
2542 B 3	2889 B 4	3714 D 5	3968 A 5	
2543 B 3	2900 A 1	3715 D 4	3969 A 5	
2544 B 3	2911 A 2	3716 D 4	3970 A 4	
2545 B 2	2912 A 2	3717 D 5	3972 D 5	
2547 B 3	2913 D 2	3718 D 5	3973 D 5	
2562 C 2	2915 C 4	3721 B 4	3974 D 5	
2576 D 2	2918 D 1	3722 B 4	3975 D 5	
2577 C 2	2956 A 1	3723 B 4	3976 D 5	
2578 D 2	2996 D 1	3724 B 4	3977 D 5	
2601 A 1	2997 C 4	3730 D 5	3978 D 5	
2602 A 1	2998 C 4	3741 A 4	3979 D 5	
2603 C 1	2999 B 4	3742 B 4	3980 D 5	
2604 B 1	3101 A 3	3743 A 4	3981 D 5	
2605 C 1	3102 A 3	3746 A 4	3982 D 5	
2606 C 1	3505 C 5	3747 A 3	3983 D 5	
2607 B 1	3511 C 5	3748 B 4	3984 C 5	
2608 B 1	3512 C 5	3749 B 4	3985 D 5	
2609 C 1	3513 C 5	3751 B 4	3986 C 5	
2611 C 1	3514 C 4	3752 B 4	4901 B 4	
2612 B 1	3529 C 4	3753 B 4	4904 B 2	
2613 C 1	3532 C 5	3754 B 4	4906 C 1	
2615 B 1	3541 B 3	3801 B 3	4907 B 3	
2616 B 1	3542 B 3	3802 B 3	5742 B 4	
2617 C 1	3545 B 3	3821 C 4	6500 B 5	
2621 C 2	3560 C 4	3822 D 4	6705 B 5	
2622 C 2	3562 D 1	3823 D 4	6741 A 3	
2623 C 2	3563 D 1	3824 C 4	6742 A 3	
2624 C 2	3564 C 2	3841 B 2	6751 B 4	
2701 D 3	3566 C 2	3842 B 2	6901 A 2	
2702 D 3	3568 C 2	3843 B 2	6902 A 2	
2703 D 2	3569 C 2	3844 B 2	6904 D 1	
2704 C 2	3570 C 2	3845 C 2	6906 D 1	
2706 C 4	3571 C 2	3846 B 3	6910 A 2	
2711 D 3	3572 C 2	3847 B 3	6952 C 5	
2712 D 4	3573 C 2	3848 B 2	6953 A 5	
2713 D 4	3574 C 2	3888 B 4	6954 A 5	
2714 D 4	3577 D 2	3889 B 4	7502 C 5	
2715 C 3	3578 C 3	3901 C 1	7506 C 4	
2721 B 4	3579 C 2	3902 C 1	7512 C 2	
2743 A 4	3601 B 1	3904 D 1	7601 C 1	
2744 A 4	3602 B 1	3905 D 1	7701 D 3	
2751 B 4	3603 B 1	3906 D 1	7703 B 4	
2752 B 4	3604 B 1	3909 D 1	7709 A 4	
2801 B 3	3605 C 1	3910 D 1	7801 B 3	
2802 A 3	3606 C 1	3911 D 1	7806 D 4	
2803 B 3	3607 B 1	3912 A 2	7841 B 2	
2804 B 3	3608 B 1	3913 A 2	7842 B 2	
2808 B 3	3609 C 1	3917 D 2	7843 B 2	
2809 B 2	3611 B 1	3918 D 2	7844 B 2	
2813 B 3	3612 B 1	3919 D 2	7845 B 3	
2814 A 2	3618 C 1	3921 A 1	7902 C 1	
2815 C 2	3619 C 2	3922 D 1	7910 D 1	
2816 B 2	3625 C 1	3923 C 4	7911 D 1	

MAIN PCB

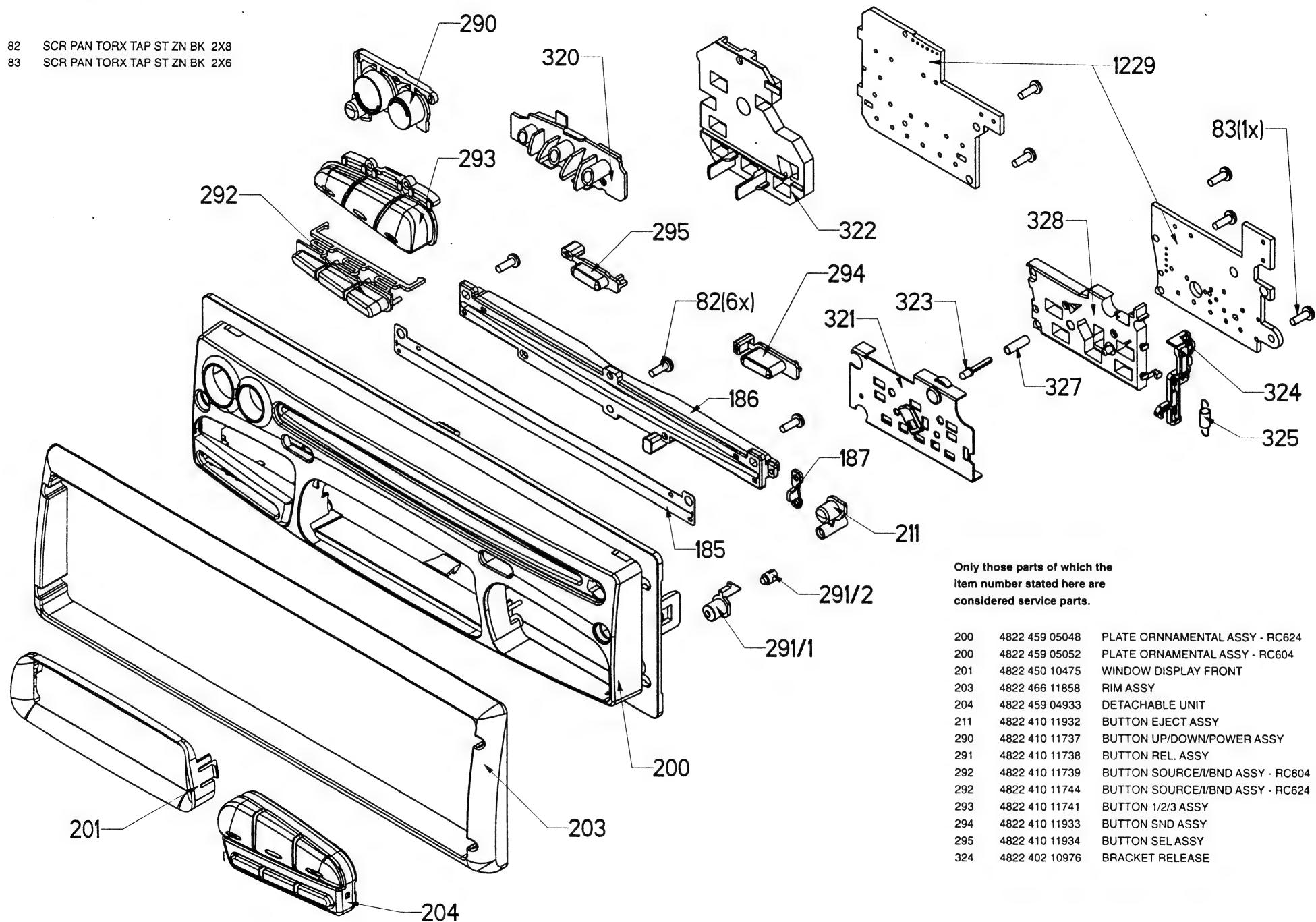


1001 A 1	9501 C 5	9941 C 3
1002 A 1	9502 C 2	9942 C 3
1003 A 1	9503 D 2	9943 B 4
1004 A 1	9506 C 2	9944 B 4
1005 A 1	9507 C 2	9945 C 4
1006 A 1	9508 C 2	9946 A 5
1007 A 1	9509 C 3	9947 B 5
1008 A 1	9512 C 3	9948 D 2
1009 A 1	9700 C 3	9949 C 2
1010 A 1	9701 C 3	9950 C 1
1011 A 2	9702 B 4	9951 C 3
1012 A 1	9703 B 4	9952 C 3
1013 A 2	9704 B 4	9953 D 4
1014 A 2	9800 B 3	9954 D 4
1015 A 2	9801 B 4	9955 D 4
1016 A 2	9802 B 4	9956 C 3
1017 A 2	9803 B 4	9957 C 3
1018 A 2	9804 A 4	9958 B 2
1019 A 2	9805 A 2	9959 B 3
1021 A 2	9807 B 2	9960 B 3
1101 A 5	9808 A 1	9961 A 3
1501 C 5	9809 C 3	9962 B 3
1502 C 5	9810 C 2	9963 B 3
1503 D 2	9811 C 2	9964 B 4
1702 D 4	9812 C 2	9965 C 5
1704 D 2	9813 C 2	9967 B 4
1710 A 3	9814 C 2	9968 C 4
1801 B 4	9900 B 1	9969 C 5
1951 D 5	9901 B 1	9970 B 3
1952 D 5	9902 B 1	9971 B 4
1953 D 5	9903 B 1	9972 B 1
1954 D 5	9904 B 1	9973 B 1
1955 D 5	9905 B 1	9974 B 1
1956 D 5	9906 C 1	9975 B 2
2705 C 2	9907 C 2	9977 C 3
2901 B 1	9908 C 2	9979 D 4
3506 C 5	9909 C 1	9980 B 4
3520 B 5	9910 D 1	9981 A 2
3530 C 4	9911 A 2	9982 A 3
3531 C 4	9912 C 1	9984 B 3
3544 B 3	9913 C 1	9985 B 3
3561 D 2	9914 A 1	9986 D 1
3565 D 2	9915 A 1	9987 D 2
3576 D 2	9916 A 2	9988 D 2
3621 C 1	9917 C 2	9989 D 3
3622 C 1	9918 C 3	9990 D 4
3623 C 2	9919 C 3	9991 D 2
3624 C 1	9920 D 5	9992 C 5
3719 B 3	9921 A 3	9993 D 5
3803 B 3	9922 C 4	9994 D 1
3908 D 1	9923 B 5	9995 A 2
3914 A 3	9924 A 3	9996 A 3
3933 D 1	9925 A 3	9997 A 3
3942 A 3	9926 A 3	9998 D 4
5701 C 3	9927 C 2	9999 D 1
5900 A 1	9928 D 4	----
6900 B 2	9929 A 4	
7508 A 3	9930 A 3	
7600 C 1	9931 A 2	
7702 C 4	9932 A 2	
7807 C 5	9933 A 2	
7901 C 1	9934 B 4	
7903 D 1	9935 B 5	
7905 B 5	9936 B 5	
7920 D 1	9937 B 5	
9500 C 5	9940 D 3	

cad ref : /parts/c8tr/bc/1c62/mblpanel-p1-980512-2
cad ref : /parts/c8tr/bc/1c62/mblpanel-p1-980512-2

RC624/604 FRONT EXPLODED VIEW

82 SCR PAN TORX TAP ST ZN BK 2X8
83 SCR PAN TORX TAP ST ZN BK 2X6

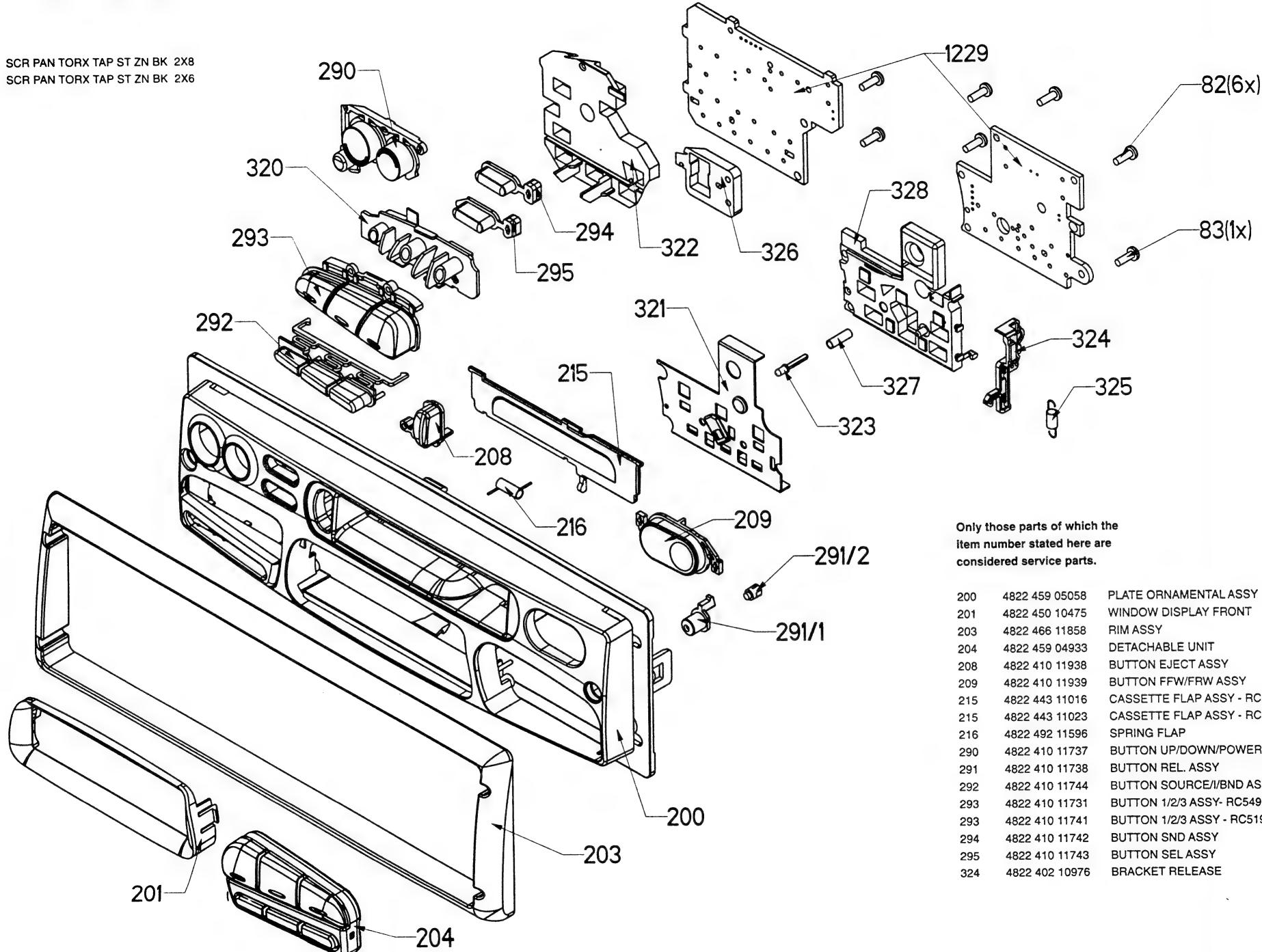


Only those parts of which the item number stated here are considered service parts.

200	4822 459 05048	PLATE ORNAMENTAL ASSY - RC624
200	4822 459 05052	PLATE ORNAMENTAL ASSY - RC604
201	4822 450 10475	WINDOW DISPLAY FRONT
203	4822 466 11858	RIM ASSY
204	4822 459 04933	DETACHABLE UNIT
211	4822 410 11932	BUTTON EJECT ASSY
290	4822 410 11737	BUTTON UP/DOWN/POWER ASSY
291	4822 410 11738	BUTTON REL. ASSY
292	4822 410 11739	BUTTON SOURCE//IBND ASSY - RC604
292	4822 410 11744	BUTTON SOURCE//IBND ASSY - RC624
293	4822 410 11741	BUTTON 1/2/3 ASSY
294	4822 410 11933	BUTTON SND ASSY
295	4822 410 11934	BUTTON SEL ASSY
324	4822 402 10976	BRACKET RELEASE

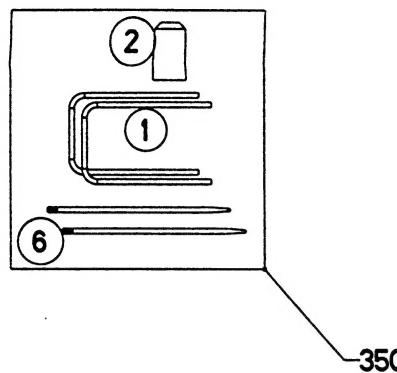
RC549/519 FRONT EXPLODED VIEW

82 SCR PAN TORX TAP ST ZN BK 2X8
83 SCR PAN TORX TAP ST ZN BK 2X6



Only those parts of which the item number stated here are considered service parts.

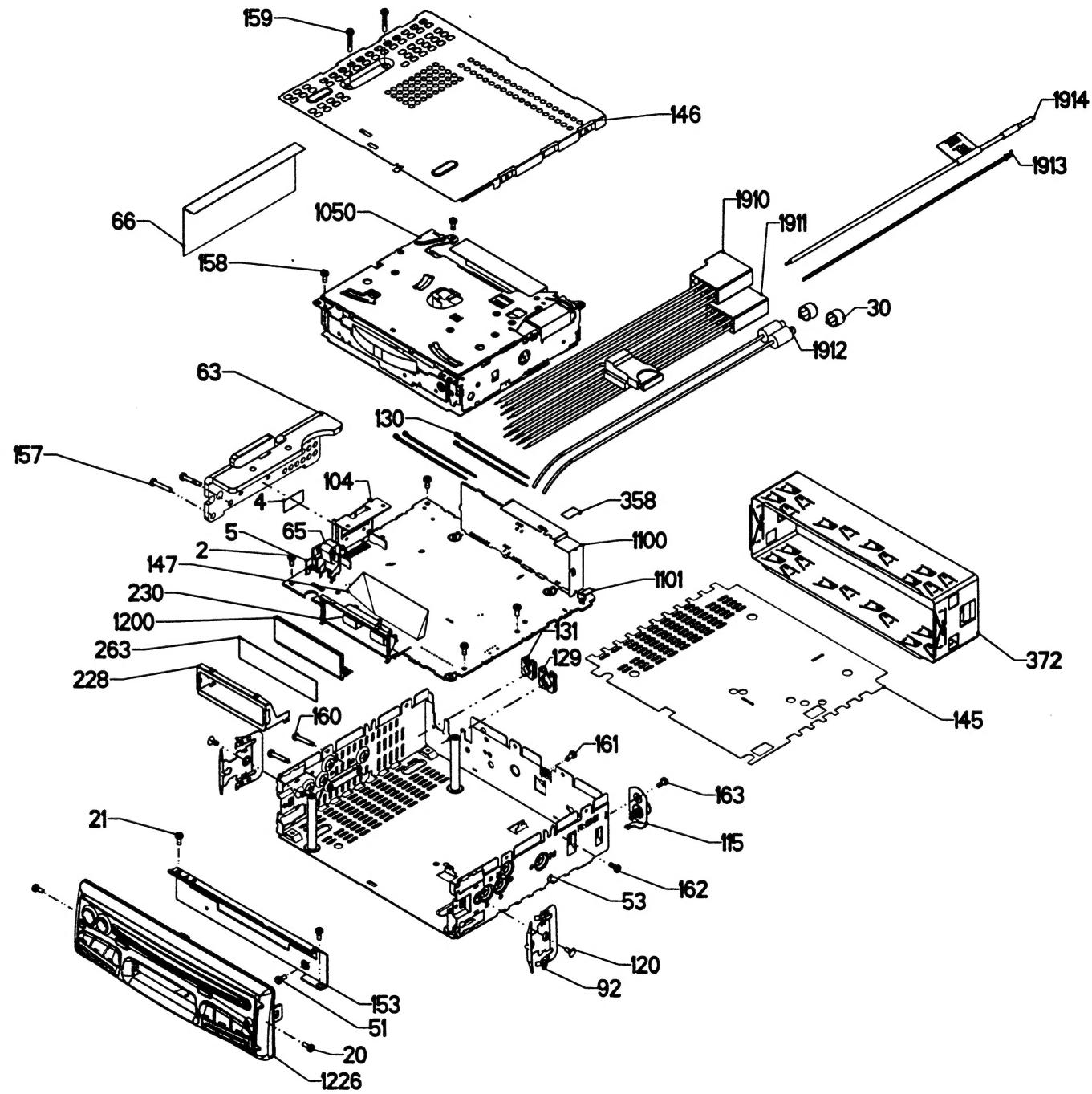
200	4822 459 05058	PLATE ORNAMENTAL ASSY
201	4822 450 10475	WINDOW DISPLAY FRONT
203	4822 466 11858	RIM ASSY
204	4822 459 04933	DETACHABLE UNIT
208	4822 410 11938	BUTTON EJECT ASSY
209	4822 410 11939	BUTTON FFW/FRW ASSY
215	4822 443 11016	CASSETTE FLAP ASSY - RC549
215	4822 443 11023	CASSETTE FLAP ASSY - RC519
216	4822 492 11596	SPRING FLAP
290	4822 410 11737	BUTTON UP/DOWN/POWER ASSY
291	4822 410 11738	BUTTON REL. ASSY
292	4822 410 11744	BUTTON SOURCE/I/BND ASSY
293	4822 410 11731	BUTTON 1/2/3 ASSY- RC549
293	4822 410 11741	BUTTON 1/2/3 ASSY - RC519
294	4822 410 11742	BUTTON SND ASSY
295	4822 410 11743	BUTTON SEL ASSY
324	4822 402 10976	BRACKET RELEASE

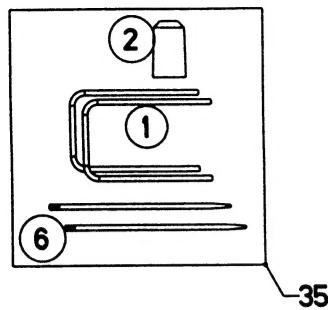


Only those parts of which the item number stated here are considered service parts.

92	4822 492 71046	SPRING MOUTING
115	4822 265 10717	CONNECTOR AERIAL ASSY
350/1	4822 404 20437	BRACKET MOUNTING
350/2	4822 532 11092	BUFFER MOUNTING
372	4822 423 90186	SLEEVE
1227	4822 691 10723	CDMM2 1.1/1 ASSY
	4822 263 21164	ADAPTOR AERIAL (ISO-DIN)-/1
	4822 256 10293	HOLDER AERIAL ADAPTOR-/1
	4822 418 10337	BOX DETACHABLE UNIT
	4822 736 16272	DIRECTION FOR USE

2	SCR PAN TAP ST ZN GN	M2.5X6
20	SCR PAN TAP ST ZN YE	M2.5X6
21	SCR PAN TAP ST ZN YE	M2.5X6
120	SCR CSK TORX TAP ST ZN	M3X6
157	SCR PAN TAP ST ZN YE	M2.5X12
158	SCR PAN TAP ST ZN YE	M2.5X6
159	SCR PAN TAP ST ZN YE	M2.5X12
160	SCR PAN TAP ST ZN YE	M2.5X16
161	SCR PAN TAP ST ZN BK	M2.5*3
162	SCR PAN TAP ST ZN YE	M2.5X6
163	SCR PAN TAP ST ZN YE	M2.5X6

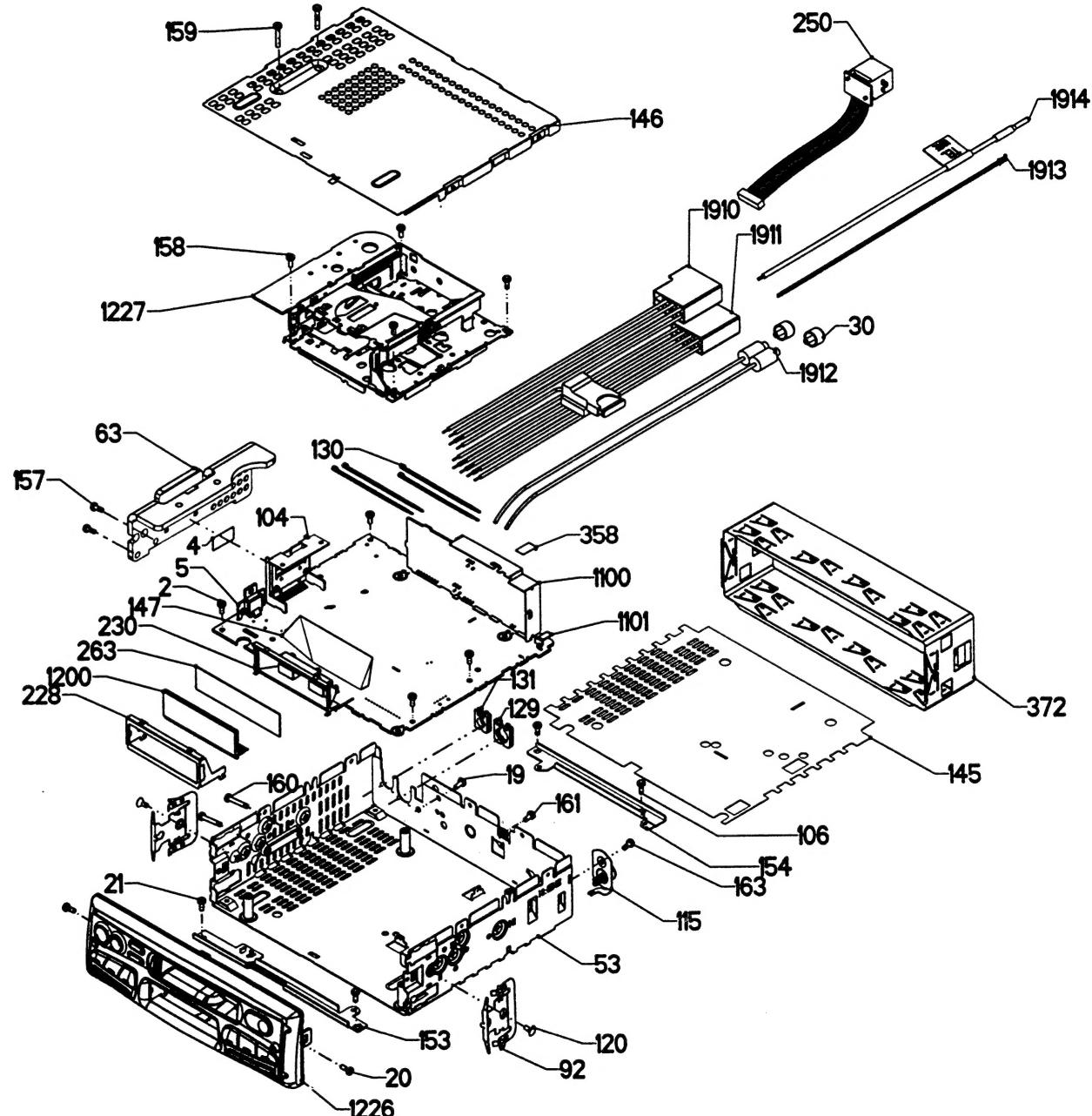




Only those parts of which the item number stated here are considered service parts.

92	4822 492 71046	SPRING MOUNTING
115	4822 265 10717	CONNECTOR AERIAL ASSY
250	4822 265 11228	CONNECTOR ASSY CDCC - RC549
350/1	4822 404 20437	BRACKET MOUNTING
350/2	4822 532 11092	BUFFER MOUNTING
372	4822 423 90186	SLEEVE
1227	4822 691 10726	TAPDECK SCA-R3.3
	4822 418 10337	BOX DETACHABLE UNIT
	4822 736 16283	DIRECTION FOR USE

2	SCR PAN TAP ST ZN GN	M2.5X6
19	SCR PAN TAP ST ZN YE	M2.5X6
20	SCR PAN TAP ST ZN YE	M2.5X6
21	SCR PAN TAP ST ZN YE	M2.5X6
106	SCR PAN TAP ST ZN YE	M2.5X6
120	SCR CSK TORX TAP ST ZN	M3X6
157	SCR PAN TAP ST ZN YE	M2.5X12
158	SCR PAN TAP ST ZN YE	M2.5X6
159	SCR PAN TAP ST ZN YE	M2.5X12
160	SCR PAN TAP ST ZN YE	M2.5X16
161	SCR PAN TAP ST ZN BK	M2.5*3
163	SCR PAN TAP ST ZN YE	M2.5X6



RC549/519 PARTSLIST

MAIN PCB : MISCELLANEOUS

1100	4822 210 10746	TUNER IC96 7SV
1200	4822 135 00168	LCD NEGATIVE PLL98
1501	4822 267 40818	TAPEDECK PLAYHEAD CONNECTOR
1702	4822 265 41508	10PIN CONNECTOR
1703	4822 242 72066	FILTER, CERAMIC CST8,00MT
1704	4822 242 70938	CRYSTAL (32.768KHZ)
1709	4822 242 81002	FILTER, CERAMIC CST6,00MGW - RC549
1806	4822 242 72195	CRYSTAL QUARZ 4,332 MHZ
1910	4822 320 12239	CABLE FLYLEAD ASSY POWER
1911	4822 320 12241	CABLE FLYLEAD ASSY SPEAKER
1912	4822 320 12389	CABLE OUT 4 CHANNEL - RC549
1913	4822 320 12277	CABLE LE MOUSE
1914	4822 320 12278	CABLE TELEPHONE MUTE
1951	4822 134 10111	T1 5V 115MA ORANGE
1952	4822 134 10111	T1 5V 115MA ORANGE
1954	4822 134 10109	T1 5V 115MA GREEN
1955	4822 134 10109	T1 5V 115MA GREEN

MAIN PCB : ELECTROLYTIC CAPACITOR

2505	4822 124 80453	100uF20% 10V
2506	4822 124 41017	10uF 16V
2507	4822 124 80453	100uF20% 10V
2509	4822 124 41017	10uF 16V
2510	4822 124 41017	10uF 16V
2541	4822 124 23504	2.2uF20% 50V
2610	4822 124 11551	10uF 20% 50V
2705	5322 125 50295	6P0-50PF - RC549
2805	4822 124 23504	2.2uF20% 50V - RC549
2806	4822 124 23504	2.2uF20% 50V - RC549
2807	4822 124 23504	2.2uF20% 50V - RC549
2810	4822 124 41017	10uF 16V
2811	4822 124 23504	2.2uF20% 50V
2812	4822 124 23504	2.2uF20% 50V
2824	4822 124 23504	2.2uF20% 50V
2829	4822 124 23504	2.2uF20% 50V
2841	4822 124 23504	2.2uF20% 50V - RC549
2842	4822 124 23504	2.2uF20% 50V - RC549
2843	4822 124 23504	2.2uF20% 50V - RC549
2844	4822 124 23504	2.2uF20% 50V - RC549
2901	4822 124 12236	3300uF 20% 16V
2903	4822 124 23279	22uF20% 16V
2904	4822 124 41017	10uF 16V
2905	4822 124 11551	10uF 20% 50V
2907	4822 124 23279	22uF20% 16V
2914	4822 124 23504	2.2uF20% 50V
2954	4822 124 22646	47uF20% 16V
2955	4822 124 23279	22uF20% 16V

MAIN PCB : PTC RESISTORS

3620	4822 116 40254	330R PTC
3744	4822 116 10063	8,2R 25% 30V PTC - RC549
3745	4822 116 10063	8,2R 25% 30V PTC - RC549
3941	4822 116 40267	3R3 25% 20V PTC
3942	4822 252 11299	RESETTABLE RUE090

MAIN PCB : COIL, DIODES

5701	4822 157 53473	1000uH 10% 4X9,8
5742	4822 157 71206	FILTER BLM21A601SPT
5900	4822 157 70935	COIL ASSY 97UH 10A
6500	4822 130 10655	1SR154-400
6705	4822 130 83757	BAS216
6741	4822 130 10657	PTZ5.6A - RC549
6742	4822 130 10657	PTZ5.6A - RC549
6751	4822 130 10185	UDZ5.6B
6900	4822 130 81624	1.5KE27
6901	4822 130 10655	1SR154-400
6902	4822 130 10655	1SR154-400
6904	4822 130 10185	UDZ5.6B
6906	4822 130 83757	BAS216
6910	4822 130 10655	1SR154-400
6952	4822 130 10658	UDZ11B
6953	4822 130 10655	1SR154-400
6954	4822 130 10655	1SR154-400

MAIN PCB : TRANSISTORS / IC

7502	4822 209 15349	TEA0676T/V1
7506	4822 130 60511	BC847B
7508	4822 209 83159	LA2000
7600	4822 209 16782	TDA7384A
7601	4822 130 60511	BC847B
7701	4822 209 16783	TMP87CM21F-50930
7703	4822 130 60511	BC847B
7709	4822 209 32743	MSM6307GS - RC549
7801	4822 209 12723	TDA7342
7806	4822 209 16164	TDA7479D
7807	4822 209 83159	LA2000
7841	4822 130 63747	DTC314TK - RC549
7842	4822 130 63747	DTC314TK - RC549
7843	4822 130 63747	DTC314TK - RC549
7844	4822 130 63747	DTC314TK - RC549
7845	5322 130 60508	BC857B - RC549
7901	4822 130 40995	BD438
7902	5322 130 60508	BC857B
7903	4822 209 16784	L7885CV
7904	4822 130 40959	BC547B
7905	4822 209 32866	L7805ABV - RC549
7905	4822 209 90567	L7800ABV - RC519
7910	4822 130 60511	BC847B
7911	5322 130 60508	BC857B
7912	5322 130 60508	BC857B
7913	4822 130 60511	BC847B
7914	4822 130 60511	BC847B
7953	5322 130 60508	BC857B
7954	5322 130 60508	BC857B
7956	4822 130 40959	BC547B
7957	4822 130 42132	BC807
7958	4822 130 42615	BC817-40
7959	5322 130 60508	BC857B
7960	4822 130 42615	BC817-40
7961	4822 130 60511	BC847B

FRONT PCB

1774	4822 276 13454	TACT SWITCH 50MA 12V
1775	4822 276 13454	TACT SWITCH 50MA 12V
1776	4822 276 13454	TACT SWITCH 50MA 12V
1777	4822 276 13454	TACT SWITCH 50MA 12V
1778	4822 276 13454	TACT SWITCH 50MA 12V
1779	4822 276 13454	TACT SWITCH 50MA 12V
1780	4822 276 12889	SWITCH IN/OUT
1781	4822 276 13454	TACT SWITCH 50MA 12V
1782	4822 276 13454	TACT SWITCH 50MA 12V
1785	4822 276 13454	TACT SWITCH 50MA 12V
1786	4822 276 13454	TACT SWITCH 50MA 12V
1787	4822 276 13454	TACT SWITCH 50MA 12V
1788	4822 276 13454	TACT SWITCH 50MA 12V
1789	4822 276 13454	TACT SWITCH 50MA 12V
1790	4822 276 13454	TACT SWITCH 50MA 12V
1791	4822 276 13454	TACT SWITCH 50MA 12V
1792	4822 276 13454	TACT SWITCH 50MA 12V
1793	4822 276 13454	TACT SWITCH 50MA 12V
1794	4822 276 13454	TACT SWITCH 50MA 12V
1795	4822 276 13454	TACT SWITCH 50MA 12V
1796	4822 276 13454	TACT SWITCH 50MA 12V
1971	4822 134 10004	T1 5V 115MA
1972	4822 134 10004	T1 5V 115MA
6973	4822 130 83558	LED YELLOW
6974	4822 130 83558	LED YELLOW
6975	4822 130 83558	LED YELLOW
6980	4822 130 11164	LED-34HD
6981	4822 130 83558	LED YELLOW

NOTE : "Service code for standard components are not listed here, please refer to Components catalogue from Philips Consumer Service."

RC624/604 PARTSLIST

MAIN PCB : MISCELLANEOUS

1100	4822 210 10746	TUNER IC96 7SV
1200	4822 135 00168	LCD NEGATIVE PLL98
1503	4822 265 10808	TAPEDECK PLAYHEAD CONNECTOR
1702	4822 265 41508	10PIN CONNECTOR
1703	4822 242 72066	FILTER, CERAMIC CST8.00MT
1704	4822 242 70938	CRYSTAL (32.768KHZ)
1806	4822 242 72195	QUARZ 4,332 MHZ AT51 - RC624
1910	4822 320 12239	CABLE FLYLEAD ASSY POWER
1911	4822 320 12241	CABLE FLYLEAD ASSY SPEAKER
1912	4822 320 12238	CABLE FLYLEAD ASSY LINE-OUT
1913	4822 320 12277	CABLE LE MOUSE
1914	4822 320 12278	CABLE TELEPHONE MUTE
1951	4822 134 10111	T1 5V 115MA ORANGE
1952	4822 134 10111	T1 5V 115MA ORANGE
1954	4822 134 10109	T1 5V 115MA GREEN
1955	4822 134 10109	T1 5V 115MA GREEN

MAIN PCB : ELECTROLYTIC CAPACITOR

2610	4822 124 11551	10UF 20% 50V
2705	5322 125 50295	6P0-50PF
2810	4822 124 41017	10UF 16V
2811	4822 124 23504	2.2UF20% 50V
2812	4822 124 23504	2.2UF20% 50V
2824	4822 124 23504	2.2UF20% 50V - RC624
2829	4822 124 23504	2.2UF20% 50V - RC624
2841	4822 124 23504	2.2UF20% 50V
2842	4822 124 23504	2.2UF20% 50V
2901	4822 124 12236	3300uF 20% 16V
2903	4822 124 23279	22UF20% 16V
2904	4822 124 41017	10UF 16V
2905	4822 124 11551	10UF 20% 50V
2907	4822 124 23279	22UF20% 16V
2914	4822 124 23504	2.2UF20% 50V
2919	4822 124 41017	10UF 16V
2954	4822 124 22646	47UF20% 16V
2955	4822 124 23279	22UF20% 16V

MAIN PCB : PTC RESISTORS

3620	4822 116 40254	330R PTC
3941	4822 116 40267	3R3 25% 20V
3942	4822 252 11299	RESETTABLE RUE090

MAIN PCB : COIL, DIODES

5701	4822 157 53473	COIL 1000UH 10% 4X9.8
5900	4822 157 70935	COIL ASSY 97UH 10A
6705	4822 130 83757	BAS216
6751	4822 130 10185	UDZ5.6B
6900	4822 130 81624	1.5KE27
6901	4822 130 10655	1SR154-400
6902	4822 130 10655	1SR154-400
6904	4822 130 10185	UDZ5.6B
6906	4822 130 83757	BAS216
6910	4822 130 10655	1SR154-400
6952	4822 130 10658	UDZ11B
6953	4822 130 10655	1SR154-400
6954	4822 130 10655	1SR154-400

MAIN PCB : TRANSISTORS / IC

7600	4822 209 16782	TDA7384A
7601	4822 130 60511	BC847B
7701	4822 209 16756	TMP87CM21F
7703	4822 130 60511	BC847B
7801	4822 209 12723	TDA7342
7806	4822 209 16164	TDA7479D - RC624
7807	4822 209 83159	LA2000 - RC624
7841	4822 130 63747	DTC314TK
7842	4822 130 63747	DTC314TK
7845	5322 130 60508	BC857B
7901	4822 130 40995	BD438
7902	5322 130 60508	BC857B
7903	4822 209 16784	L7885CV
7904	4822 130 40959	BC547B
7905	4822 209 90567	L7800ABV
7910	4822 130 60511	BC847B
7911	5322 130 60508	BC857B
7912	5322 130 60508	BC857B
7913	4822 130 60511	BC847B
7914	4822 130 60511	BC847B
7920	4822 209 90567	L7800ABV
7953	5322 130 60508	BC857B
7954	5322 130 60508	BC857B
7956	4822 130 40959	BC547B
7957	4822 130 42132	BC807
7958	4822 130 42615	BC817-40
7959	5322 130 60508	BC857B
7960	4822 130 42615	BC817-40
7961	4822 130 60511	BC847B

FRONT PCB

1774	4822 276 13454	TACT SWITCH 50MA 12V
1775	4822 276 13454	TACT SWITCH 50MA 12V
1776	4822 276 13454	TACT SWITCH 50MA 12V
1777	4822 276 13454	TACT SWITCH 50MA 12V
1778	4822 276 13454	TACT SWITCH 50MA 12V
1779	4822 276 13454	TACT SWITCH 50MA 12V
1780	4822 276 12889	SWITCH IN/OUT
1781	4822 276 13454	TACT SWITCH 50MA 12V
1782	4822 276 13454	TACT SWITCH 50MA 12V
1785	4822 276 13454	TACT SWITCH 50MA 12V
1786	4822 276 13454	TACT SWITCH 50MA 12V
1787	4822 276 13454	TACT SWITCH 50MA 12V
1788	4822 276 13454	TACT SWITCH 50MA 12V
1791	4822 276 13454	TACT SWITCH 50MA 12V
1792	4822 276 13454	TACT SWITCH 50MA 12V
1793	4822 276 13454	TACT SWITCH 50MA 12V
1794	4822 276 13454	TACT SWITCH 50MA 12V
1795	4822 276 13454	TACT SWITCH 50MA 12V
1796	4822 276 13454	TACT SWITCH 50MA 12V
1971	4822 134 10004	T1 5V 115MA
1972	4822 134 10004	T1 5V 115MA
6973	4822 130 83558	LED YELLOW
6975	4822 130 83558	LED YELLOW
6976	4822 130 83558	LED YELLOW
6980	4822 130 11164	LED-34HD

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